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ABSTRACT

Historically, policies and funding guidelines for most federal educational programs have not adequately recognized the diversity of rural schools. A dichotomy of rural and urban, or even a tripartite classification (urban, suburban, and rural), would mask the internal diversity of rural schools. Current efforts to understand the condition of public education in this country will fall short unless this diversity is acknowledged. The federal government, particularly the Department of Education, should take the lead in developing a policy-impact code for classifying the nation's rural school districts. A desirable policy-impact code would use variables that have demonstrated predictive value relevant to differences among rural districts, would include all rural school districts, and would be limited to a number of categories small enough to be recognized and understood easily. Other criteria may include content of indicators (relevance for policy formation) and data collection standards. Such criteria suggest a causal-model approach to indicator development that would include four classes of indicators: context, input, process, and outcome. An initial literature review identified about 90 possible indicators, of which 36 were chosen. The National Center for Education Statistics should convene a study panel to consider the policy and technical issues involved in developing this federal classification code. This paper contains 79 references and data tables detailing major education programs of various federal agencies. (SV)

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Toward the Construction of a Federal Policy-Impact Code for Classifying the Nation's Rural School Districts

Working Paper

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June 1992

The Appalachia Educational Laboratory (AEL), Inc., works with educators in ongoing R & D-based efforts to improve education and educational opportunity. AEL serves as the Regional Educational Laboratory for Kentucky, Tennessee, Virginia, and West Virginia. It also operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL works to improve:

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This paper represents a first attempt to shape a debate concerning a large number of persistent issues that have confronted rural interests for many years. My interest in the approach argued for in the paper is that it strikes me as a meaningful way for promoting the long-term strategic goal of influencing all facets of the policy cycle for rural education at both the federal and state levels.

I am grateful to the Council for Educational Development and Research whose support, in part, allowed me to devote time to the overview of current federal practices concerning rural education that is described here. Importantly, it was during this experience where a number of potential strategies for addressing the complex issue of how best to approach the rural school district diversity question began to come into better focus.

I also express appreciation to a number of reviewers who critiqued an earlier draft of the paper: Bob Bhaerman and Rick Grove, Research for Better Schools; Craig Howley and Jack Sanders, Appalachia Educational Laboratory; and Bob Carlson, University of Vermont. While a number of these individuals expressed concerns about certain design features of the proposed classification system, all seemed to enthusiastically embrace the general strategy called for. I, of course, take responsibility for selecting the outline of the design that appears in this publication.

The assistance of Sue Dorcey, College Park, who typed original drafts of the report is also acknowledged. The technical assistance of the staff of the Appalachia Educational Laboratory in the production of the paper was again demonstrated to me, as it has been on a number of occasions in recent years.

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ABSTRACT

This paper offers a rationale for developing a federal classification code for rural school districts that would reflect their diversity more consistently and accurately than do various procedures in current use. As a basis for discussion, it suggests four broad classes of indicators (containing a total of 36 individual indicators) that meet accepted standards for inclusion in such a code. Finally, it recommends that the National Center for Education Statistics (NCES) convene a study panel of federal, state, and other experts to consider both the policy and technical issues involved.

SECTION ONE: INTRODUCTION

The public school universe in this nation is a huge enterprise, involving as it does more than 15,000 school districts who maintain more than 83,000 schools, serve approximately 40 million students in grades K-12, and employ slightly more than 2.2 million teachers and nearly an equal number of other staff. The monies expended in support of this undertaking are also significant, mounting to approximately $235 billion in 1986-87 (National Center for Education Statistics [NCES], 1991).

Historically, education assistance programs administered by various departments and independent agencies of the federal government have overwhelmingly viewed this universe as a monolith. More recently, and, it would seem, largely as a result of Congressional insistence, some, but still clearly not a significant portion, of federal efforts in education have begun to reflect in their intended targeted institutions and clientele a view that the public school universe should, at least in part, be considered a bifurcated system composed of essentially two broad categories of public school districts—urban and rural. Most of this shift has occurred in the Congressional practice of supporting new education programs that increasingly target special populations of students, and then the further practice of earmarking or establishing a set-aside for either urban and/or rural special populations, such as the disadvantaged, the homeless, the gifted and talented, the limited English proficiency, the handicapped, and the American Indian.

This relatively new position, though still not the prevailing practice for the vast majority of federal education programs, it is to be stressed, would nonetheless be viewed as a measure of progress by some rural education advocates who have over the years called attention to the perceived shortcomings of federal support for rural schools (Bass & Berman, 1979; Gjelten, 1980; N. E. Hearn, personal communication, July 9, 1981; Sher, 1977).

The recent increasing recognition that there is a need to address the special problems of both rural and urban systems, however, still falls short of providing a necessary prerequisite step for the formulation of federal policies and their resultant programs that are meaningful, as well as equitable. Hardly anyone would argue with the position that the one, single, essential precondition for good public policymaking is the right definition of the problem that is to be addressed by a public policy (and in its resultant operational programs). Two premises are made here that suggests the federal government's still predominant position of viewing the public school universe as a monolith is no longer justifiable and must be discontinued:

- It can be argued that on the basis of most indicators that measure the health or performance of an educational institution, it is probably more accurate to characterize the public school universe as a tripartite having three major categories—urban, rural, and suburban, as shown in Figure 1; and, importantly, each of which has a number of clearly distinguishable subgroups.
- Furthermore, it can also be argued that the rural school district component of this tripartite, though increasingly having much in common with many urban systems, is even more diverse than the other two.[1]

These two serve as the basis for one additional premise:

- The decision to acknowledge the complexities of the rural component of the public school universe

operating in this nation is a political one, as most policy choices in the final analysis are, and not a technical one, for a reasonably acceptable technical solution that would better address the diversity in this component, though difficult, is nonetheless attainable.

The focus of this paper is on the second and third of the three premises established above. That it is important to acknowledge diversity in rural education has been commented on by many and for a very long period of time (Butterworth and Dawson, 1952; Commission on Schools in Rural Communities, 1939; Nachtigal, 1982; National Education Association [NEA], 1955; Sher, 1977).

Sher's observation is typical of those of others who lament the propensity of members of the policy community to view rural schools as a single whole:

> The point is that rural America is far too heterogeneous and complex to be amenable to simplistic definitions or comfortable stereotypes...like rural America as a whole, rural schools and school districts are distinguished by their diversity. Despite increasing standardization, rural schools still tend to reflect the pluralism found among the rural communities they serve...as a consequence, treating rural schools and school districts as if they were a unified, monolithic entity would be a serious mistake (p. 1).

Gjelten's (1982) oft-quoted observation is also instructive:

> ...despite their homogeneity, very small districts in this country are as different from each other as they are from suburban or urban school systems (p. 12).

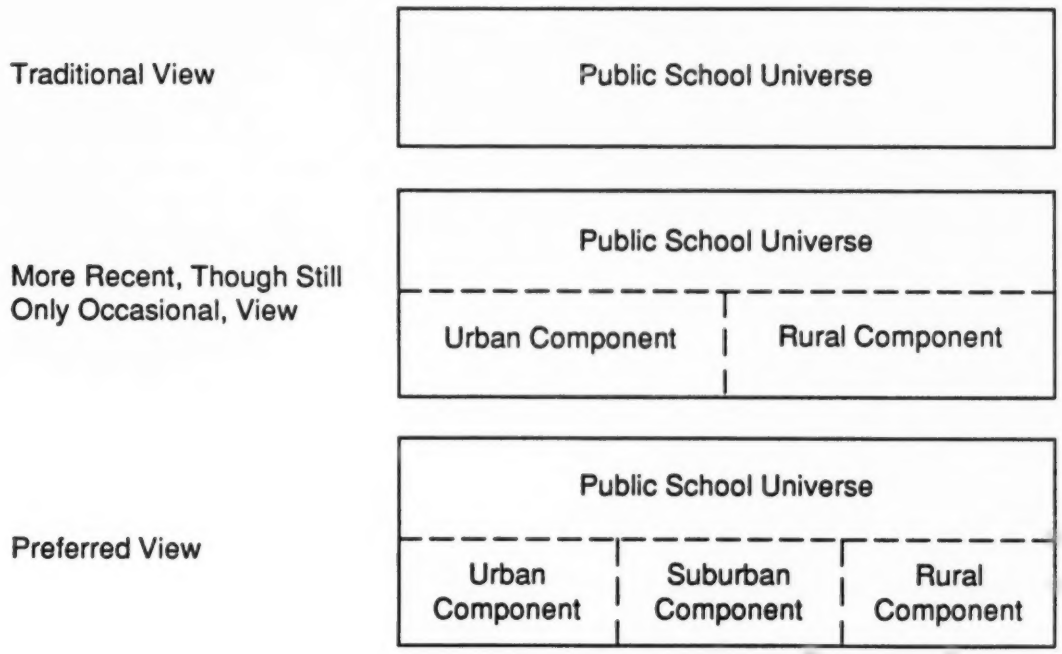

Figure 1
Preferred View of the Public School Universe

Yet many of the frequently eloquent calls for caution in lumping all rural school districts into one category tend to be relatively silent on how to account for the dissimilarities that they argue exist. Or, they tend to describe differing types of rural communities and then extend these dominant community features to distinguish types of rural schools, on the assumption (correctly, I believe) that rural schools reflect the norms of the communities they serve more than other types of schools do.[2]

The extensive use of community features as the primary building block for classifying rural districts, however, tends to give great weight to qualitative measures. Though clearly important, it is not likely that the federal policy communities can base major national policy goals and program objectives on such measures. Rather, federal policy has in the past and likely always will be driven by quantifiable data. So the issue confronting rural school interests especially, as well as those concerned generally about both the equity and effectiveness of any federal initiatives, is one of establishing a defensible way to account for their similarities and dissimilarities, but to do so with measures that are most amenable to the norms of federal policy analysis.

Small size and a relative degree of isolation are not just widely recognized common features of most rural school districts, they are their defining characteristics. Moreover, the small size of rural systems accounts for other important defining features as well, such as small-scale programming and staffing. Yet, these and other typical attributes do not account for all, nor not necessarily even the most important, demonstrable differences that exist among these small-scale organizations. The issue that confronts members of the research and policy communities who have strong views about this issue, then, is one of designing a system that would classify rural systems in a way that would establish the nature of the diversity that does exist as a guide for influencing the formulation of federal policies (and, it is hoped, state policies as well) that are both effective and equitable.

But what rules of classification should be adhered to in this effort? What criteria ought to be used for the hoped-for construction of a rural school district policy-impact classification system that would better promote the national interest in education? Equally important, what alternative measures are available to operationalize these criteria once selected? These and other questions will be pursued in this paper.

Objective of Paper and Approach Used

The objective of this paper is two-fold. The intent is to stimulate a debate concerning the need for greater acknowledgment in federal education assistance programs of the diversity that exists among the nation's rural school districts and to initiate a discussion of how best to do this. The approach used to achieve this two-fold objective consists of four sequential steps.

First, I provide a rationale for why the statement concentrates on the need for the federal government and the research/school improvement communities supported by it to take the lead in the acknowledgment of the diversity that exists in the rural component of the public school universe. I then establish an overview of ways the federal government presently targets rural school districts and/or students who attend these schools, followed by a brief discussion of possible reasons that explain the federal reluctance to do more than it currently does.

Next, I propose the broad outline of a design for the construction of a rural school district policy-impact classification system that it is believed would be useful for stimulating the preferred broader-based discussion of the costs and benefits of the use of such a system. Included here is a discussion of the major assumptions I am willing to initially make in this beginning of what is a hoped-for concerted effort to build a useful policy-impact code. Also included is the identification of criteria that ought to be given prominence in the selection of measures for establishing the similarities and dissimilarities in rural districts, and the identification of alternative measures that appear to be available for operationalizing these criteria once selected. This is followed by the proposed design of a policy-impact code for classifying the nation's rural systems.

Finally, I suggest a number of next steps that

ought to be taken to promote further the debate concerning the merits of the eventual construction of a meaningful policy-impact classification system for rural districts that would serve the federal pursuit of the unending and perhaps unendable quest for both equity and excellence in what, as will be documented below, is clearly still a very important segment of public education in this nation.

It should be apparent that the primary objective of this exercise, that of promoting a debate concerning the need to acknowledge better the rural district diversity and optional ways to do so, flows from the overarching, and also single, long-term strategic political goal held of influencing all facets of the federal policy cycle for education (e.g., the initiation, estimation, selection, implementation, evaluation, and termination phases[3]) to ensure better that rural school interests are promoted. The eventual development of a policy-impact code for classifying the nation's rural school districts represents a critical prerequisite first step toward this long-term strategic goal.

It is to be stressed that the paper stops short of arguing for a specific rural school typology, consistent with the part of the objective that promotes a debate concerning what is the most meaningful way to begin to do this. One could argue with each of the steps taken in the approach used here, and it is, of course, my hope that this be done. Also consistent with this paper's objective is my running up the proverbial flagpole a potentially useful conceptual and analytical approach for resolving what is clearly a serious public policy issue for the entire nation, not just rural interests, that should, indeed must, no longer be largely ignored.

I have no preconceptions that the inclusion of my early personal preferences of how one could address the issue of the most meaningful way to view the diversity existing in the rural component of the public school universe will somehow inhibit the debate. Indeed, my experience in matters like this suggests to me that just the opposite is likely; that is, the placement of one proposal on the table can just as likely result in raising the level of the debate. Moreover, I did not want this exercise to end by being just another in a long line of essays that call attention to the issue, but stop short of proposing a conceptual and analytical framework for the ultimate resolution of the issue.

What About the Definitional Issue?

Some might question whether it is possible to debate the issue of the need for and how best to design a rural district policy-impact classification system without first having reached a consensus concerning how one should define the object of the exercise—a rural school district. That is, as this line of argument would go, is not the beginning work on a policy-impact code such as that initiated here premature? Certainly a strong case can be made that the eventual adoption of a uniform definition of a rural system by various federal departments and independent agencies having an education mission is an absolute necessity to ensure that rural interests are promoted, not penalized, in federal policy initiatives, as I have argued in the past (Stephens, 1990). It is also clear that the widely disparate definitions used on occasion by various departments of the federal government, some of which strike me as highly questionable, stand as a serious obstacle for assessing the intended effects of current or planned federally-supported rural set-asides.[4] I continue to hold the position that a commonly used definition of a rural district is a necessary precondition for establishing equity and other policy effects, and am unpersuaded by the implied acceptance by some (Rios, 1988) that it does not seem possible to arrive at a consensus concerning how best to describe a rural school system.[5]

Nonetheless, the movement toward the construction of a useful policy-impact classification system, it can also be argued, might well be the best course of action to take at this time for the eventual resolution of the definitional issue. That is, the completion of a policy-impact code could facilitate the subsequent testing of the costs and benefits of the use of alternative definitions. Moreover, and importantly, proceeding with the development of a code would likely enjoy substantial political appeal in that, while avoiding some methodological issues, it would nonetheless provide a more focused direction for needed improvements in existing federal policy for rural districts, as well as other planned initiatives that might be considered in the short term. It is for these reasons that this exercise is being pursued.

Section Two: Why the Concentration on the Federal Level?

It might strike some as strange that the focus here is on the federal level, rather than the state; after all, education is a state function. Moreover, the federal interest in education has historically been circumscribed by competing political ideology, and further, its long-term limited fiscal support has even declined over the past decade. These issues notwithstanding, there are at least six principal reasons that together form the rationale for why the paper is directed at the need for the federal government to take the lead in the establishment of a rural school district policy-impact classification system. Together, the themes stressed in this summary make use of what Dunn (1981) refers to as the three approaches to policy analysis: the empirical approach (that asks the primary question—does the issue exist¿); the evaluation approach (that asks the primary question—of what worth is the issue¿); and the normative approach (that asks the primary question—what should be done about the issue¿) (pp. 36-38). The six themes are:

- By most conventional measures of significance, the rural school district component continues to be an important part of the public school universe in this nation, despite huge changes in nonmetropolitan regions over much of the last half-century.
- The sea changes occurring in the national and international economies are impacting the diverse nonmetropolitan regions of the nation, and by extension, the rural schools situated there, in unique, and, in most cases, damaging ways.
- Federal support, though historically not ever substantial and declining in recent years, is nonetheless critical, especially for special populations of rural students.
- The current federal interest in expanding its nonfiscal, but still very important, efforts to profile the condition of American education will be incomplete unless the diversity of the rural component is better acknowledged.
- Similarly, the current federal interest in the development of a national rural development policy will fall short of its goals if one of the important centerpieces of this strategy, the education infrastructure in rural areas, continues to be treated as an indistinguishable whole.
- Finally, but equally critical, federal behavior frequently not only influences parallel action on the state level, but in the case of profiling American education, can also provide important incentives for the states to follow suit.

Each of these points will be briefly addressed below. Some of the lines of argument are old refrains, but their regular use does not diminish their importance.[6] Other of the themes, though also oft-repeated in the past, have new meaning given the recent, unmistakable changes underway in the traditional federal-state-local relationships in education.

The Significance of the Rural Component

Establishing a measure of the significance of the rural school district component of the public school universe is complicated, primarily because defining a rural system in a precise way continues to be elusive.

Departments and independent agencies of the federal government seldom make distinctions in their formula aid grants programs, a point raised previously. Where they do establish a rural set-aside or target rural schools or students, a variety of program-specific definitions are used. Moreover, while the United States Department of Education's (ED) NCES increasingly distinguishes rural in its expanding and increasing rich data collection efforts, it seldom reports on these in its periodic status reports. Additionally, though NCES supports special reports on the condition of education (e.g., National Assessment of Educational Progress, High School and Beyond (1980-1992), and National Education Longitudinal Study of 1988) and increasingly makes type-of-district distinctions, differing definitions of rural are used. And the members of the federal executive branch are not alone in playing loose with the definitional issue. For example, the summer of 1991 witnessed the introduction of two major new Congressional initiatives intended to provide significant assistance to the nation's rural school systems. One of these, the Rural Schools of America Act of 1991 (HR 2819) defines a rural district in part as one having an enrollment of fewer than 2,500 students and does not serve schools located in a metropolitan statistical area (p. 54). The Senate version of this bill, Education U.S.A.: School Restructuring Goals and Results for America's Schools Act of 1991 (S. 1135), defines a rural district in part as one having an enrollment of fewer than 300 students and does not serve schools located in a metropolitan statistical area (p. 69). Before criticizing these practices too seriously, though, one needs to be somewhat sympathetic given the apparent inability, unwillingness, or indifference of the research, policy, and professional communities to strike a consensus concerning the most meaningful way to define rural.

These issues notwithstanding, the interest here is in establishing the significance of the rural component. One way to do this is by the use of three commonly accepted indications of the importance of an educational activity of one sector of the public school enterprise in this nation: the number and the percent of the public school universe that should be regarded as rural; the number and percent of the total public school enrollment that should be recognized as in attendance in rural systems; and the number and percent of the total public school teachers who are employed by such systems.

The most reliable data available on a number of these measures are contained in the soon-to-be-released report, *The Condition of Education in Rural, Small Schools* (Elder, in press), the Congressionally-mandated study being produced by the United States Department of Education. W. L. Elder, a rural sociologist with the Office of Social and Economic Data Analysis, University of Missouri System, prepared the report. His work is the definitive effort thus far to profile the significance of rural school districts. Elder's conclusions are that in 1989-90:

- Rural districts represent nearly one-half (47.2%) of the nation's 15,123 districts.
- Rural schools represent slightly less than one-fourth (22.3%) of the 79,307 schools in 48 of the states (all except Alaska and Hawaii).
- These schools and districts enrolled slightly less than one out of eight (11.8%) of the 39.9 million students.
- Rural districts employed 13.4 percent of the 2.2 million public school teachers.

So, it makes eminent sense for the federal government (and, of course, the states as well, where the rural component in many cases is clearly the dominant sector of the state school system) to pay attention to rural schools. Their sheer numbers, and the number of students and staff affected, are justification for doing so. Moreover, this rationale is added to in still other important ways, especially when one considers that while there are similarities in the context in which rural systems function, there are great differences as well, a point stressed below.

The Differing Effects of Socioeconomic and Political Trends

Much has been documented on the nature of both national and international forces impacting nonmetropolitan regions of the country. In an earlier synthe-

sis (Stephens, 1991) of these forces that relied heavily on the rich resources and work of the staff of the Economic Research Service, United States Department of Agriculture, I singled out the following six themes as particularly significant, as well as having different effects for many rural regions of the nation:

- transformations in the world economy,
- the restructuring of the national economy,
- changes in population patterns,
- changes in the federal role in the federal system,
- shifts in the fiscal capacity of local governments, and
- shifts in the political power of local governments.

Most of the six major socioeconomic and political trends have a number of subtrends, as shown in Figure 2 (p. 8).

It is true, of course, that a number of the six trends are also affecting metropolitan regions, as well as nonmetropolitan areas of the nation. Of importance to this exercise, however, is that a number of the trends are affecting different sectors of nonmetropolitan areas, and the rural school serving these communities, in significantly different ways. For example:

- The agricultural and energy production sectors of nonmetropolitan America (e.g., the Corn Belt, the Great Plains, Appalachia) have been severely affected for much of the past decade by increased world production of food, by the decline in the amount of raw material needed for production, and by increases in international energy supplies.
- The labor-intensive manufacturing sectors of nonmetropolitan America (e.g., the Midwest, the South) have been handicapped by lower foreign production costs in the increasingly competitive international markets.
- The concentration of service industries in metropolitan areas, in addition to the two trends cited previously, has contributed to huge population losses in the 1980s in many nonmetropolitan regions, especially in the Corn Belt, the Great Plains, the Mississippi Delta, and Appalachia coal mining regions.
- Higher unemployment rates, lower personal income, and higher rates of poverty, that are in part the result of the national and international trends cited above, are obviously most acute in those nonmetropolitan areas most affected by these trends.
- Rural local governments in these same regions are also increasingly handicapped in their ability to support public services—including education; moreover, these regions would ordinarily experience greater difficulty in making adjustments caused by a lessening of federal resources to state and local jurisdictions, which has been the case for much of the past decade.

For several years now, the Economic Research Service of the United States Department of Agriculture has been engaged in the development of what tends to be referred to as "policy-impact codes" as a way to better understand the diversity that exists among the nation's approximately 2,400 nonmetropolitan counties. The selective use of these classification systems has greatly enriched the nation's understanding of the diversity in rural America (as, for example, contributing to a decline in the previous prevailing practice in many quarters of automatically equating rural with agricultural), and, though difficult to assess, has undoubtedly enhanced the quality of the debate surrounding federal rural development policy. The two classifications make use of the critical considerations of:

- size of population of metro and nonmetro counties and nonmetro counties classified by size of urban population and adjacency to metro areas (the "Beale Code") (see Appendix A); and
- nonmetro counties classified by primary economic activity and selected social indicators (the "Bender et al. Code") (see Appendix B).

However, no known effort is currently underway in federal departments and independent agencies that administer education programs to make use of one or both of these two "policy-impact" classification systems.

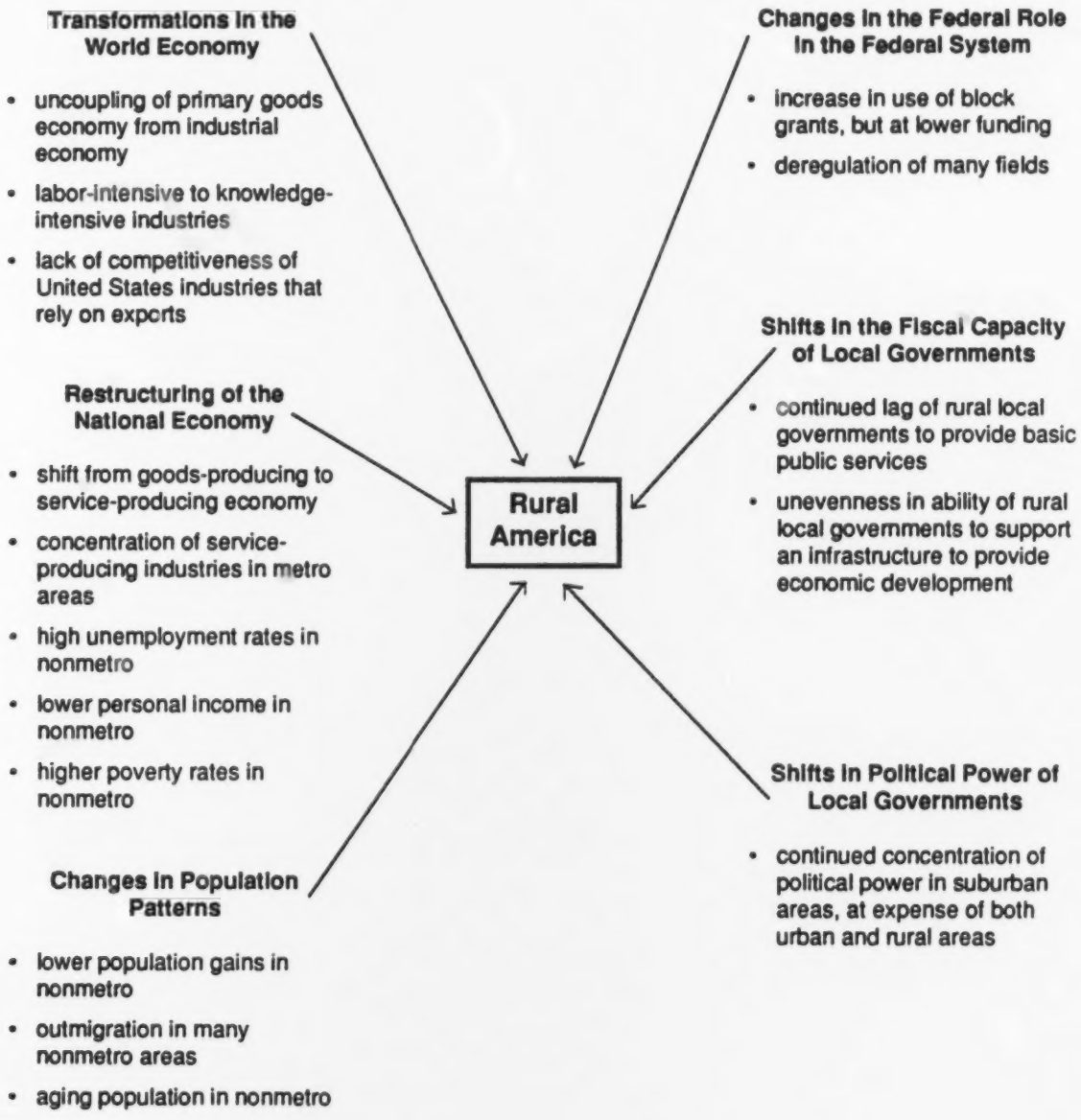

Figure 2

Major Socioeconomic and Political Forces Impacting Rural America

Federal Support is Still Important

It is important to note at the onset that although the ED's estimated on-budget support for elementary-secondary education of $19.8 billion in 1989 is significant and addresses a large number of commonly accepted priorities, it still represents only a small fraction of the total revenue for education at this level. Most estimates of the level of federal support for public elementary-secondary education are in general agreement with that of the NEA that placed this figure at 6.4 percent for all schools in the nation in 1989 (NEA Research Division, 1990). The average for individual districts and states has varied over time. For example, the estimated percent of revenue for public elementary-secondary schools from the federal government in 1986-87 varied from a high of approximately 15.6 percent in Mississippi to a low of approximately 3 percent in New Hampshire (NEA, 1988).

Moreover, the current levels of federal support for education represent a decline over the past decade from previous levels (Clark & Astuto, 1988; Hoffman, 1990; NEA, 1990; Verstegen, 1988). Nonetheless, although the rural portion of this declining federal share of expenditures in support of elementary-secondary education is problematic, a point to be discussed below, it is no doubt still important. This is especially true for special populations of rural students. This point will be addressed in the next section.

The Success of New Federal Initiatives

It now seems clear that there is substantial support in both the executive and legislative branches of the federal government to expand the federal presence in education. One of the initial ways that this is to be accomplished is through an expansion of one of the original missions of the federal interest in education, providing the nation with comprehensive and timely reports on the condition of American education. The recent adoption of national goals for education, the ambitious charge contained in the 1991 report *America 2000* (United States Department of Education, 1991), as well as the accelerated efforts to develop a national report card, are without precedent and most assuredly will result in a new federal posture in the workings of elementary-secondary education in this nation.

Ostensibly, one reports on the condition of something so that someone, be it the federal government, state governments, local jurisdictions, or a combination of all three levels, can design a strategy, and resultant policies and programs, to correct areas where a deficiency is uncovered, or preserve areas that are functioning at the desired level of performance. If this assumption is accepted, and it seems incomprehensible that this is not the driving motive behind the bold new federal interest in education, then it makes eminent sense that the federal government report on the condition of American education not through a telescope but, rather, to make use of more refined and appropriate analytical procedures.

It seems abundantly clear that many rural systems simply do not have the institutional capacity, for example, to meet the ambitious enriched curricular offerings required to address the national goals in science and mathematics. But which rural systems are these? And what strategies are required to assist the deficient systems in meeting the new national norms? Lumping all rural school systems together will hardly be adequate. Indeed, doing so will likely lead to the design of strategies that are only marginally successful or worse, counterproductive, for achievement of the presumed overriding federal interest in education, the simultaneous pursuit of both quality and equity in American education.

National Rural Development Policy

It would seem that there is a renewed bipartisan commitment for the development of a comprehensive, cohesive, and integrated national policy for rural development. According to Osbourn (1988), the Rural Development program formulated by the Eisenhower administration is generally recognized as

"the first instance in which 'rural development' became a stated objective of the Federal Government" (p. 1). Since the late 1950s, a recognition of the need for a rural development policy of some type enjoyed support in both the legislative and executive branches of government, resulting in a number of important milestones, especially:

- the Rural Development Act of 1972 (P.L. 92-419), and
- the Rural Development Policy Act of 1980 (P.L. 96-355).

The most recent effort to express a national rural development policy is contained in a recent publication, *Rural Economic Development for the '90s: A Presidential Initiative* (Yeutter, 1990). Though the position of the Bush administration, like the Reagan administration before it, calls for a continuation of the lessening of a federal role in rural economic development and a shifting of prime responsibility to the states, it does not envision a total retrenchment. A strong, healthy education infrastructure continues to be recognized as one of the centerpieces of a meaningful federal interest in rural economic development policy and programs. The issue facing the federal government, then, seems quite clear. It makes eminent sense that the existing, extremely limited, data sources on rural school districts be greatly enhanced so that the emerging federal role can be most productive in assisting the states in mounting useful rural development initiatives.

Federal Behavior Influences Parallel State Action

The final line of argument introduced here for why this statement concentrates on the federal level might well be viewed by some as the most convincing of those outlined thus far. It is generally acknowledged that many of the data systems used by the states are greatly influenced by federal data requirements. The incentives are great for a state to create a data gathering, analysis, and reporting system that is in close alignment with federal requirements in order to remain in compliance with some federal requirements, facilitate the securing of grants, and for other reasons.

In education, the principal depository for education data is of course the NCES. NCES currently maintains a large, and in recent years, constantly expanding, number of rich data files on elementary-secondary education, including:

- the Common Core of Data (that contains information on all public schools, public school districts, and both fiscal and nonfiscal data on each of the states, the District of Columbia, and outlying areas);
- the Schools and Staffing Survey (that includes information on such topics as teacher supply and shortages, staffing patterns, teacher turnover, and perceptions of working conditions); and
- three major longitudinal studies (High School and Beyond (1980-1992); the National Assessment of Educational Progress; and the National Education Longitudinal Study of 1988).

As it is clear that the data files maintained by NCES will be further expanded in the near future as a result of the requirements of *America 2000* (United States Department of Education, 1991). In most of their work, NCES staff appear to go to extraordinary efforts to engage representatives of state education agencies in their planning. Indeed, for the collection of its baseline data contained in the Common Core of Data and the Schools and Staffing Survey, NCES staff reimburse the states for their contributions. These practices provide a number of incentives for the states to arrange their data collection practices in close alignment with federal needs and requirements. Thus, should NCES make use of some version of a policy-code for classifying rural school districts, it is highly likely that in this one stroke, it would not only be possible to establish a national profile of rural systems, but, importantly, it would also provide a consistent, uniform profile of the individual states as well.

The potential of this move by NCES will be even greater in the near future. As Elder (1991) reminds us,

the work underway to develop useful typologies on rural education:

> ...is bound to be stimulated by the greatly expanded level of detail about rural areas that is part of the 1990 Census of Population and Housing. The 1990 Census will be available at block and block group levels of geography even in rural areas, and procedures to avoid suppressing data for small areas have been implemented. In addition, the 1990 Census products include digital lines files that will make computerized mapping and spatial analysis of small areas such as school districts commonplace. Indeed, a cooperative federal and state project to digitally map the boundaries of all U.S. school districts is already underway (p. 2).

Elder provided another useful insight in a recent telephone conference where he lamented that it would be a tragedy if some way was not found to bring together the new, rich data that will soon be available on the public school universe in this nation with the also rich data analysis capabilities now possible as a result of new technologies.

SECTION THREE: CURRENT FEDERAL PRACTICES TARGETING RURAL EDUCATION

Discussed next is a summary of existing federal practices that target rural school districts. The profile draws heavily from an unpublished larger report completed a year ago that formed the basis of one of the chapters in a forthcoming Congressionally-mandated United States Department of Education report on *The Condition of Education in Rural, Small Schools* (Elder, in press). Following this review is another discussion of factors that together help explain the apparent decision of federal policymakers to generally not differentiate type of school system in its support programs, let alone take the further step of acknowledging the diversity in the rural component of the public school universe. The profile of current efforts of the federal government that target rural districts is organized around:

- those of the Department of Education, and
- the major education programs undertaken by other departments and individual agencies.

Policies and Programs of the Department of Education

Presented below is a discussion of existing ED policies and sponsored programs targeted specifically on promoting equity and quality in rural, small school district programming. Included in the discussion are the following: an overview of current programs administered by ED; a review of current ED policy that establishes a departmental commitment to promote the interests of the nation's rural, small school district programming; a description of the department's internal planning and coordination strategies to promote rural education; a description of current ED programs that by statute or ED regulation are specially targeted on rural, small school district programming; a description of examples of administrative targeting practices of the department that have a rural school focus; and a brief description of two known discretionary ED programs having an urban focus, but no rural or suburban counterpart.

An overview of current ED programming. Federal support for education is classified into three categories. Hoffman's (1989) definitions will be used to establish the distinctions between the three:

- **On-Budget Support**: Those program funding activities that are supported by an annual Congressional appropriation; elementary-secondary agencies and postsecondary agencies and institutions are the primary recipients of these funds.
- **Off-Budget Support**: Those program funding activities that generally do not involve federal budget outlays except in cases of default (e.g., student financial assistance, guaranteed student loans, work-study programs); all off-budget support goes to postsecondary education.
- **Federal Tax Expenditures Support**: Those revenue losses attributable to federal tax laws that allow a special exclusion, exemption, or deduction from gross income or that provide a special credit, a preferential rate of tax, or other deferral of tax liability (pp. 3-11).

It is important initially to establish that though

ED has responsibility for the administration of the single largest total federal outlay for education, the agency is by no means the only federal unit having an education mission. According to a later report by Hoffman (1990), 44.2 percent of the federal government's estimated $46.7 billion on-budget support for education is under the responsibility of ED. As shown in Figure 3, the remaining more than 55 percent was administered by eight other departments and several independent agencies.

It is further estimated that $19.8 billion of the $46.7 billion ED on-budget funds in 1989 was devoted to elementary-secondary education. Postsecondary programs and university research ($11.9 and $11.8 billion, respectively) account for most of the remaining funds (Hoffman, 1990, p. 7).

ED administers the bulk of its state and local education agency assistance programs through the work of six offices. In FY 90, these six offices were responsible for 207 programs that provide federal funds to the states, organizations, or individual recipients (United States Department of Education, 1990a). Of this number, approximately two-thirds are of potential significance for elementary-secondary education. Forty-two of the 207 programs are formula grants. The substantial majority of these formula grant programs are designed to assist elementary-secondary education. The 42 programs include many of the big-ticket items administered by the department (e.g., Education of the Handicapped: Basic State Grants; and Vocational Education: Basic Grants to the States).

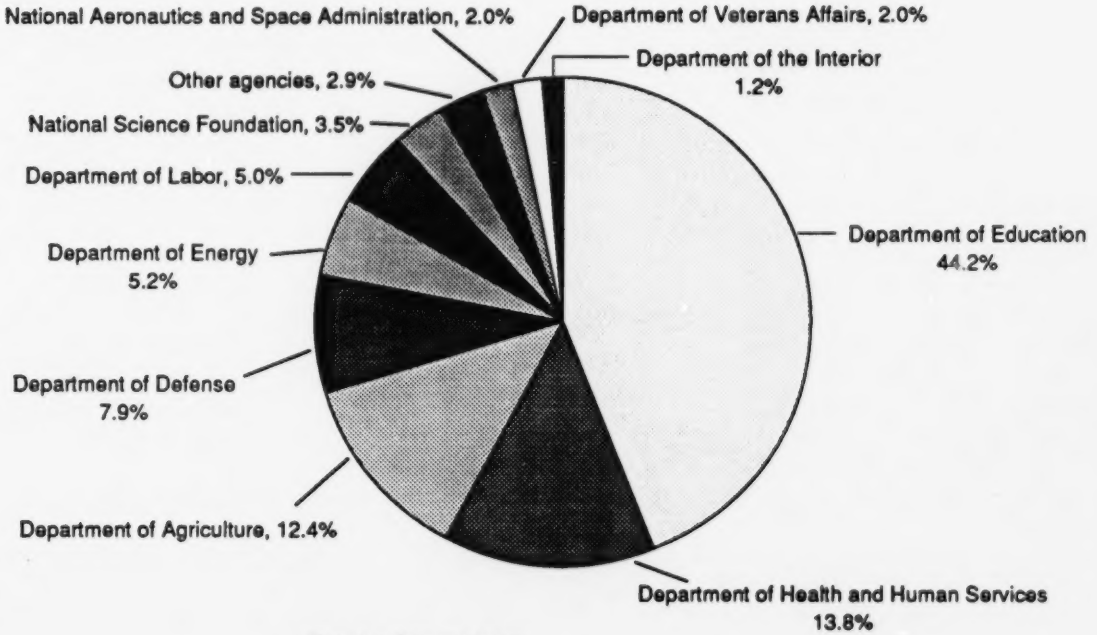

Figure 3
Distribution of Federal On-Budget Funds for Education, by Agency: Fiscal Year 1989

Source: Hoffman, C. M. (August 1990). *Federal Support for Education: Fiscal Years 1980 to 1989.* Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics (p. 3).

Moreover, a number of the biggest of the big-ticket formula grants are block grants to the states that make use of their own largely state-determined allocation plans, consistent with the spirit of the "new federalism." This arrangement, though welcomed by many, complicates tracking the ultimate recipients of formula grants administered by ED (as well as for those administered by other federal departments).

What has been established thus far is that a relatively large number of programs of potential benefit to all types of school systems—urban, suburban, and rural alike—are currently in place. These programs cover a wide range of educational activities and, importantly, they target special populations of elementary-secondary school age students, especially the disadvantaged and the handicapped.

Current ED policy statement. One major policy statement establishing a departmental commitment for promoting equity and quality in rural, small school districts was adopted by ED in the 1980s. The policy statement cited here that specifically establishes rural education as the focus of the department's energies is viewed to be unusual in that it represents a departure from what appears to be a long-standing position of the agency that all of the nation's schools are to be the benefactors of its efforts. No known similar effort for urban or suburban schools, couched in the strong language of a clear and unambiguous policy statement, is known to exist.

The statement setting forth the department's intent to assist rural systems was the adoption in October of 1983 of the *Rural Education and Rural Family Education Policy for the '80s* (United States Department of Education, 1983). Enactment of this statement, that is believed to be without precedent at least in recent history, was championed by then Secretary of Education T. H. Bell. It represented Secretary Bell's response to the directive of Public Law 96-88, Section 206 (1979), the Department of Education Authorization Act that directed ED to establish a new organizational commitment to the nation's rural schools. The statement was clear in its intent:

> Rural education shall receive an equitable share of the information, services, assistance, and funds available from and through the Department of Education and its programs (p. 2)

Importantly, the statement also specified nine specific areas of activity that ED was prepared to undertake in fulfillment of its policy intent, subject, of course, to the availability of resources. The relative ambitiousness and comprehensiveness of the priorities identified can best be captured by a review of Table 1 that provides a complete statement of ED's tactical objectives in the nine areas that are designed to achieve its new strategic policy goal.

ED's internal planning and coordination strategies. The prime strategy employed by the department to coordinate what is viewed here as its new unprecedented rural education mission was to create in 1982 the Intra-Agency Rural Education Committee, composed of representatives of the six offices of the department that administer the major programs of this agency, and all other Principal Operating Components (POCs) of the department (POCs include: Private Education; Intergovernmental and Interagency Affairs; General Counsel; Planning, Budget, and Evaluation; Civil Rights; Management; and Legislation). Administrative responsibility for the work of the Committee is lodged with the Assistant Secretary of Vocational and Adult Education, as required by Public Law 96-88, Section 206. From its inception, the Committee has been chaired by the Deputy Director of the Division of National Programs in the Office of Vocational and Adult Education.

From its beginning, it was intended that the Committee perform its planning and coordinating role through a number of activities:

1. Ensure the level of information exchange across ED POCs that is necessary to achieve a unified approach to rural education and rural family education.
2. Maintain liaison with rural education organizations, agencies, and institutions and communicate with them on rural related activities and issues.
3. Review legislation and regulations for possible inequities related to rural education.
4. Develop, publish, and track an ED Rural Education Policy Statement.
5. Develop a rural education research and

Table 1

Tactical Objectives of 1983 United States Department of Education's Rural Education and Rural Family Education Policy for the 1980s

- The Department will assist educators and administrators on all levels interested in developing outreach and volunteer programs with the active support *and interaction* of parents, teachers, civic groups, and the business community to improve the delivery of educational services to rural communities.
- The Department will work to expand the database on the condition of education in rural areas, and will provide the necessary technologies to disseminate information relevant to curriculum, organization, personnel, and support services needed for educational institutions serving rural communities. *Data collection will focus on information relating to regional designations; goals of rural education and rural family education; surveys of rural curricula; test score comparisons; tax base/student ratios; characteristics of effective rural programs and institutions; and descriptions of intermediate service agency delivery systems. To disseminate information to educational institutions and programs serving rural communities, including rural school districts, the Department will utilize State Departments of Education; ERIC Clearinghouse on Rural Education and Small Schools; the Rural Education Association; other professional and service organizations; national advisory councils; youth organizations; intermediate units; American Education Magazine; and county and local agencies.*
- The Department, *with appropriate control staff*, will closely monitor Education program regulations, eligibility and evaluation criteria, subregulatory directives, and administrative policies to ensure equity for all LEAs regardless of size, location, or condition. *Monitoring will focus on reducing complexity of criteria for funding; reducing complexity of application and reporting procedures and forms; and reducing unrealistic requirements in general while ensuring competent and enlightened staff monitoring.*
- The Department will assist in identifying and developing special programs available for handicapped individuals located in rural areas.
- The Department will provide personnel to coordinate the consolidation of available research on shortages and additional needs for analysis by the Secretary's Rural Education Committee. *Research will focus on effective practices and characteristics of effective rural programs and projects.*
- The Department will include rural institutions in demonstration and pilot projects, and will involve cross sections of rural communities in educational technology planning.
- The Department will provide consultative and technical assistance to rural educational entities as a means to improve the quality of education in rural areas. *To facilitate communications, the Department will support initiatives such as an annual national forum; a monthly newsletter; and utilization of extension services and existing organizations for dissemination of information.*
- The Department will assist rural education in improving the achievement of Black students, American Indian students, children of migrant workers, and other minorities. *To this end, the Department will focus on data concerning rates of graduation from high school and college, including secondary and postsecondary vocational institutions and programs; gains in functional literacy, changes in college enrollment, and achievements in adult education.*
- The Department will assist individuals and families living in rural areas with family education programs and services through vocational home economics education, an established delivery system, as a means of improving quality of rural family education.

Source: United States Department of Education, 1983.

development agenda for consideration of ED managers in establishing and funding rural education priorities.

6. Prepare papers on rural education issues and provide ED national leadership for rural education.

7. Collaborate with the National Rural Education Association to plan and conduct an annual National Rural Education Forum.

8. Respond to the needs of the Federal Interagency Committee on Education (FICE) Subcommittee on Rural Education for information on department-specific programs and initiatives in rural education.

9. Prepare an annual ED report on programs and projects affecting rural education (FICE, personal communication, no date; FICE, personal communication, June 1990).

A description of the work of the Committee in all nine activity areas cited above over the eight years of its existence was not undertaken here. However, it should be noted that a research and development agenda (activity #5) was adopted in 1989, and is described more fully in the following discussion of efforts of other units of the federal government. Additionally, the Committee was successful in collaborating with the National Rural Education Association in launching in 1986 an annual "Rural Education Research Forum" (activity #7) that now regularly attracts approximately 100 registrations from the research and policy communities.

It is also true that one of the units of the Office of Educational Research and Improvement (OERI), the Educational Networks Division, has for the past three years designated one staff member as the Rural Education Coordinator. However, the intent of this new assignment would seem to be to orchestrate the activities of the division that is the administrative unit for the Regional Educational Laboratory program that since 1987 includes the new Congressionally-mandated "Rural Initiative" set-aside. Thus, there does not appear at this time to be a connection between the establishment of the position of Rural Education Coordinator and the 1988 policy statement.

The Intra-Agency Rural Education Committee was deactivated by order of the Assistant Secretary of Vocational and Adult Education in 1990. Its future status is unknown at this time.

Current ED programs specially targeted on rural district programming. The procedures used to establish the scope of current ED programs that by statute or ED regulations are specially targeted on rural, small school district programming made use of several steps. The Office of Planning, Budgeting, and Evaluation (OPBE) in ED was asked to provide the following information for each of the elementary-secondary programs administered by the six major operational offices of the department listed in the *Guide to Department of Education Programs* (United States Department of Education, 1990a):

- What programs are by statute and/or ED regulations targeted on rural schools? What is the FY 90 appropriation for each?
- Is there a rural set-aside for the program, and if so, what is it?
- Is there a definition of "rural" for the program, and if so, what is it?
- What formula is used in the program, if any?

This probe established that there are presently 12 elementary-secondary programs that satisfy the main criteria represented in the questions initially posed for OPBE; i.e., what programs are by statute and/or ED regulations targeted on rural schools? Selected features of the 12 are provided in Table 2.

Illustrations of administrative targeting practices. ED also makes use of rural district set-asides or targeting plans by departmental or administrative discretionary choice, as opposed to doing so because of an explicit statutory or regulatory requirement. Though clearly not widely practiced, these efforts are nonetheless important to rural systems, or potentially can be in the future. Probably the most notable examples are the Star Schools Demonstration

Table 2

Selected Features of Programs Administered by ED Targeted on Rural Education, FY 90

Program Title, Catalogue of Federal Domestic Assistance (CFDA) Number, and Appropriation (in millions)	Major Program Objectives	Major Features of Allocation Formula, if Used	Urban or Rural Set-Aside, if Any	Matching Requirements?	Maintenance of Effort Requirement?
Rural Technical Assistance Centers, Chapter 1 CFDA #84.028 $4.4 million (10 Centers)	establish regional resource centers to provide advice and technical services to educators for improving the education of handicapped children Elementary and Secondary Education Act of 1965, Title I, Chapter 1, Part F, Subpart 3	contract	rural - yes	no	no
Regional Educational Laboratories CFDA #84.117 $25.5 million (9 Laboratories)	advance knowledge about education policy and practice through the planning, institutional operations, and special activities	contract	rural - yes ($5.9 M)	no	no
ERIC/Clearinghouse no number-contract $6.54 million (16 centers; other adjunct)	acquires and maintains database on research documents, journal articles, other materials; prepares monographs, digests, other products	contract	urban - yes (approx. $297,000) rural - yes (approx. $302,000)	no	no
Early Childhood Education CFDA #84.024	early childhood experimental, demonstration, and outreach projects Education of Handicapped Act, Section 623 (a) Education of Handicapped Act, Section 623 (a)	as much as feasible to be "geographically disbursed throughout the nation in urban as well as rural areas"	urban - yes rural - yes	no	no
Severely Handicapped Projects CFDA #84.086	Education of handicapped Act, Section 624 (c)	same as above	rural - yes	no	no
Even Start CFDA #84.213, #84.214	Elementary-Secondary Act of 1965, Title I, Chapter 1, Part B, Section 1057(c)	"in approving grants...the Secretary shall assure an equitable distribution of assistance among the states, among urban and rural areas of the United States, and among urban and rural areas of a state"	urban - yes rural - yes	no	no

Table 2 (continued)

Selected Features of Programs Administered by ED Targeted on Rural Education, FY 90

Program Title, Catalogue of Federal Domestic Assistance (CFDA) Number, and Appropriation (in millions)	Major Program Objectives	Major Features of Allocation Formula, if Used	Urban or Rural Set-Aside, if Any	Matching Requirements?	Maintenance of Effort Requirement?
Chapter I Migrant Education CFDA #84.011, #84.114	Elementary-Secondary Education Act of 1965, Chapter 1, Part D, Subpart 1	because of the nature of the program, rural residents are primary intended beneficiaries	rural - yes	no	no
Migrant Education: High School Equivalency Program CFDA #84.141	Higher Education Act, Section 418A	same as above	rural - yes	no	no
Public Library Services CFDA #84.034	grants to states may be used for establishing and operating programs and projects to provide library services for the disadvantaged in urban and rural areas Section 102(a)(2)(B)(iii)		urban - yes rural - yes	no	no
Dropout Prevention Demonstrations CFDA #84.201	Elementary and Secondary Education Act of 1965, Title VI, Part A, Section 6004	30% allotted to LEAs with enrollments of less than 20,000; of this amount 20% must be awarded to LEAs with less than 2,000	rural - yes	no	no
Secondary Schools Basic Skills Demonstrations CFDA #84.227	Elementary and Secondary Education Act of 1965, Title VI, Part B, Section 6106	Secretary shall assure recipients are representative of rural and urban regions	urban - yes rural - yes	no	no
National Institute on Disability and Rehabilitation Research CFDA #84.133	establish center in institution of higher learning for research and training for the delivery of rehabilitation services to rural areas; and, dissemination of innovative rehabilitation engineering services in rural and urban areas Rehabilitation Act of 1973, 202(j)(3) and 204(b)(2)(B)		urban - yes rural - yes	no	no

Source: United States General Services Administration, 1990.

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project, the beginning work underway at NCES, and the School Recognition program.

The Star Schools program, administered by OERI, is a major new federal initiative that has improving the quality of rural school district programming as one of its primary initial targets. Priority preference for applications was, in fact, to be given to those:

> ...that will offer significant new educational opportunities to traditionally underserved populations and areas with scarce resources and limited access to courses in mathematics, science, and foreign language (Education for Economic Security Act of 1988, Title IX, Section 905[c][1]).

The NCES is the principal agency of the federal government for the collection, analysis, and reporting of statistics on education in the United States. Among the major periodic reports on elementary-secondary education produced by NCES are:

- the *Digest of Education Statistics,*
- *The Condition of Education*, and
- *Projections of Education Statistics* (for 10 years out).

The NCES also produces a large number of special reports on topics of special interest to local, state, and federal policymakers, frequently drawing as it does on the Center's comprehensive databases on elementary-secondary education that include:

- Common Core of Data,
- Schools and Staffing Survey,
- High School and Beyond (1980-1992),
- National Assessment of Educational Progress, and
- National Education Longitudinal Study of 1988.

The increasing importance that ED places on the work of NCES is, in part, reflected in the proposed increase in its new budget: From $21.7 million in FY 89, and $22.6 million in FY 90, to a substantial increase to $41.5 million in the FY 91 asking budget (United States Department of Education, 1990b).

Distinctions between rural, suburban, and urban school districts are not at this point made in most of NCES's major periodic reports (e.g., *The Condition of Education, Digest of Education Statistics*, and *Projections of Education Statistics*), though the digest does make use of school district size of enrollment in some of its statistical reporting (e.g., the number and percent of districts and their enrollment by eight enrollment size categories). These data do allow some approximations to be made on the approximate number of small, but not necessarily rural, districts. The enrollment of the 130 largest public school districts and selected data on all districts enrolling 20,000 or more students are also reported in the digest.

Rural, suburban, and urban distinctions are maintained in some of the five principal elementary-secondary databases previously cited, thus facilitating the use of community-type in some, but not all, of the special reports produced by NCES and other units of ED that make use of the databases. A description of the main features of each of the five databases and an indication of whether or not a community-type variable are provided in Table 3, along with the various definitions of rural district, where used.

An extremely promising recent development at NCES was the construction of a typology that assigns all schools (not school districts) in the nation to one of seven mutually exclusive types of locale. The seven types of locale comprising the typology commonly referred to as the "Johnson Code" (Johnson, 1989) are:

1. **Large City**: Central city of a Standard Metropolitan Statistical Area (SMSA), with the city having a population greater than or equal to 400,000 or a population density greater than or equal to 6,000 people per square mile.
2. **Mid-Size City**: Central city of a SMSA, with the city having a population less than 400,000 and a population density less than 6,000 people per square mile.
3. **Urban Fringe of Large City**: Place within a

Table 3

Overview of Five Elementary-Secondary Databases Maintained by NCES

Database	Brief Description	Community-Type Variable Included:
Common Core of Data	primary statistical database on all public schools in the 50 states and outlying areas; 3 categories of data: general descriptive data; basic statistics (e.g., number of students and staff); and fiscal data (e.g., revenues and expenditures); 4 separate but linked data files maintained on school, district, and state universes	Education Agency Universe • central city of a SMSA • within a SMSA but not central city • outside a SMSA Public School Universe (Johnson Typology)
Schools and Staffing Survey	begun 1987-88; next survey 1990-91, then at 2-year intervals; sample of teachers and administrators in public and private schools; 5 major areas of data: (1) teacher supply and demand, (2) characteristics of teaching force, (3) workplace conditions, (4) characteristics of school administrators, and (5) school programs and services	Yes; basic community-type same as Common Core of Data
High School and Beyond (1980-1992)	begun in 1980, 3 followup surveys since conducted, with next planned for 1991-92; sample of sophomores and seniors; areas stressed include: educational attainment, postsecondary activities, and factors that influence academic success and failure	Yes; basic community-type same as Common Core of Data
National Assessment of Educational Progress	begin in 1969; sample of 9, 13, and 17-year olds in public and private schools; since 1983, also sampling students by grade level; primary goal is to report on the status and trends in educational achievement in selected academic fields	Yes; will vary depending on nature of report; usually include size and type of community
National Education Longitudinal Study of 1988	sample of 8th-grade students in public and private schools, with followup studies at 10th and 12th grades; areas stressed include: measures of educational attainment, how school policies and practices and family involvement affect achievement, persistence in school, and postsecondary plans.	Yes; basic community-type same as Common Core of Data

Source: OERI, 1990.

SMSA of a Large City and defined as urban by Census.

4. **Urban Fringe of Mid-Size City**: Place within a SMSA of a Mid-Size City and defined as urban by Census.

5. **Large Town**: Town not within a SMSA, with a population greater than or equal to 25,000.

6. **Small Town**: Town not within a SMSA and with a population less than 25,000 and greater than or equal to 2,500 people.

7. **Rural**: A place with fewer than 2,500 people or a place having a ZIP Code designated rural by Census (pp. 4-5).

Another example of administrative targeting by a unit in ED is the recent action of the School Recognition program in OERI to promote rural school participation in the department's annual exercise to identify and recognize exemplary schools. Each year this program, begun in 1982, alternately focuses on elementary and secondary schools. Nominations are received from each state education agency and the Council for American Private Education. Relatively rigorous criteria are used to assess the merits of each nomination.

Concern about the low participation rate of rural schools in the early years of the activity led the staff of the School Recognition program to take several steps, beginning with the 1988-89 program. On the one hand, it encouraged state education agencies to provide technical assistance to rural districts for the completion of the comprehensive, self-reporting nomination materials. Additionally, rural education specialists were consciously sought out to serve on the national review panels that evaluate nominations received from the states or from the Council for American Private Education. Other rural specialists were appointed to the visitation teams that spend multiple days on-site at each school tentatively identified by the national review panel as warranting recognition. In 1989-90, three rural specialists served on the 100-member review panel. Thirty-two of the 497 elementary schools nominated for last year's program were located in communities with a population of less than 2,500 (also a new, and lower, population figure than used in previous years that should promote in the future even better assessments of the level of small [but not necessarily rural] school participation) (data provided by staff of the School Recognition program).

Rural share of federal programs for special populations of students. The department presently sponsors a number of programs targeted on special populations of students without reference to the type of school district where these students are enrolled. Targeted groups of elementary-secondary school-age children and youth cited in the program descriptions for the approximately 140 elementary-secondary programs listed in the *Guide to Department of Education Programs* (United States Department of Education, 1990a) include:

disadvantaged,	gifted and talented,
homeless,	limited English proficiency,
high-risk,	handicapped,
migrants,	American Indians,
immigrants,	Native Hawaiians, and
women and girls,	vocational.

All of these categories of students, as well as others cited in the guide, satisfy the preferred working definition of special populations that ideally would be used in an exercise of this type. However, because of the absence of even limited participation rates by type of local district for most of the categories, the limited discussion that follows is restricted to the four categories of: the vocational student, the handicapped student, the limited English proficiency student, and Chapter I-type offerings.[7]

A number of major limitations are present in this (and probably in any other) discussion of the equity of ED's programs targeted on these four categories of special students in attendance at rural schools. Chief among these are:

- Even under the best of circumstances, ascertaining the rural share of many of the big-ticket items, that is, the formula grants, is complicated by the fact that most of these

programs are aid grants to the states who have their own distributive formulas, thus making it difficult to establish the ultimate recipients of many of the large federal categorical programs.

- Adding further to the issue raised above, different definitions of rural have been and continue to be used by the federal government and by the states.

What then can be established concerning the rural share of ED's programs targeted on the four special populations? Very little, it would seem. The profile that follows is clearly sketchy and consists essentially of a review of reports that cast some, highly fragmented, insight on the issue.

In a 1989 report by the United States General Accounting Office (GAO) (*Rural Development: Federal Programs That Focus on Rural America and Its Economic Development*), three questions were focused on: what is rural America, what is the rural share of federal funding, and what are rural development-type programs? The definition of rural America arrived at was to define rural as "counties with urban populations of less than 20,000" (p. 1). Some of the major GAO findings, all based on 1985 data, are reported below.

In the area of vocational education:

- The rural percent of the relatively massive Vocational Education—Basic Grants to the States (CFDA No. 84.048) could not be established, nor could several of the smaller scale vocational education programs: Vocational Education—Consumer and Homemaking Education (Grants) (CFDA No. 84.049); Vocational Education—Community Based Organizations (Grants) (CFDA No. 84.174) (p. 51).

In the area of educationally deprived children:

- The rural share was 19 percent of the massive Educationally Deprived Children—Local Educational Agencies (Grants) (CFDA No. 84.010) (p. 53).

- The rural share was 12 percent of the Bilingual Education (Grants, Payments) (CFDA No. 84.003) (p. 53).

OERI's major study of Chapter I (*The Current Operation of the Chapter I Program*, 1987) was based on a sample of 2,200 districts currently receiving Chapter I funds. The sample included districts from eight enrollment size categories. A number of the principal findings of this study of interest here are:

- Of all Chapter I public school students in the nation, 33 percent reside in rural districts. Of all public school students, 32 percent reside in rural districts. Of all Chapter I public school students in the nation, 7 percent reside in districts with enrollments of fewer than 1,000 students. Of all public school students, 8 percent reside in districts with enrollments of fewer than 1,000 students (p. 17).

- Local administrative staffing and structure depend on the size of the Chapter I project. In small districts, the coordinator responsible for all Chapter I administrative activities tends to work parttime on the program and to have other major instructional or administrative responsibilities as well. Program management tasks in these districts are usually limited because of the project's small size (p. 140).

Several findings of the 1989 *National Assessment of Vocational Education* report (United States Department of Education) of the impact of the Carl D. Perkins Act of 1984 also provide some insights of interest here:

- There is some evidence that Basic Grant funds are targeted to school districts with higher rates of poverty (p. vii).

- Most school districts received awards that were too small to mount new initiatives of any size. Half of all school districts received $7,910 or less, and three-quarters of the districts received $25,000 or less. Such resources are insufficient to pay for even one fulltime teaching position (p. vii).

Separate area vocational school districts both received more and expended more monies for vocational education than individual school districts

(pp. 9-11). Many separate area vocational schools include rural districts in their service region.

Though tracking the rural share of federal aid to special populations of students is difficult, a number of observations concerning the workings of formula grant programs in general do provide some insight on this issue. Barro (1990) studied the distribution of 11 major ED formula grant programs in elementary-secondary education (all funded at $100 million or more in FY 1989). The allocation factors used in the 11 programs were:

- **Need Indicators**: These person-counts were of three types—*broad population counts* that determine allocations under Chapter 2 Block Grants, Mathematics and Science, Drug-Free Schools, and Vocational Education programs; *a count of persons with an attribute related to programs goals*, namely poverty, that determine allocations under Chapter 1 grants, other program-related attributes control allocations for Migrant Education, Adult Education, and Impact-Aid funds; and *counts of persons served* that govern allocations under the major programs of aid for education of the handicapped.

- **Fiscal Capacity**: Only the Vocational Education formula now takes differences in fiscal capacity (represented by per capita income) into account for distributing aid.

- **Cost of Education**: There are no explicit cost factors in the current formulas, but it is generally understood that the per pupil expenditure figures in the Chapter 1 and Impact Aid formulas are there to serve as proxies for the cost of education (pp. iv-vi).

None of the 11 allocation formulas makes use of indicators of fiscal effort, defined by Barro as the ratio of a state's nonfederal education revenue to support education to its fiscal capacity (p. v). A number of the 11 grants programs also have certain restrictions:

- **Lower-Bound Provisions**: For example, the rule that each state must receive at least 1/2 of 1 percent of the available funds (included in Chapter 2 Block Grants, Mathematics and Science, Drug-Free Schools, Vocational Education, Adult Education, and Chapter 1 Concentration Grants).

- **Hold Harmless Provisions**: For example, the Chapter 1 rule guaranteeing each county 85 percent of its prior-year funding, and rules that fix allocations indefinitely at levels that the state's relative needs no longer justify (e.g., the rule that no state shall receive less Vocational Education aid than it received in FY 1985) (pp. vi-vii).

Distribution formulas that make use of certain allocation factors potentially favor urban districts over rural systems. For example, the widely used poverty rates, available only every 10 years through the decennial Census of Population, have consistently been higher in nonmetro than metro areas.[8] Also, as stressed by Reeder (1990), the equally widely used population count "is biased against low density rural areas, whose services cost more per unit due to diseconomies of scale associated with low population density" (pp. 49-50).[9]

Moreover, another issue here is that, as Reeder suggests, though some states have enacted targeted general fiscal assistance programs, most have not (p. 10). Compounding this problem is that: As with most Federal aid going to local governments in the form of State-administered block grants, however, Federal control over this intrastate targeting is limited to guidelines or broad restrictions placed on the States, leaving the States with considerable flexibility to affect the way the aid is targeted (p. 10).

Other ED activities. Two other activities of the department are cited in this overview, both representing clear discretionary choices by ED to give special attention to urban education issues. Neither initiative has a rural (or suburban) counterpart.

Beginning in the fall of 1990, the department began the funding of 24 educational Research and Development Centers. The program, administered by the Office of Research, has a projected five-year funding level of $125.3 million (Office of the Federal Register, 1990). Eighteen new centers are to be funded, in addition to six centers that are to be

continued from the 21 units that were funded during the previous five-year period.

The priorities of the centers were established after a lengthy, year-long review process in which the Office of Research held public planning sessions and solicited comments from a cross-section of the research and policy communities, and from the general public. One of the new centers is to focus on the theme of "Education in the Inner Cities." No comparable rural theme is planned. It is not possible at this time to determine whether or not a rural emphasis has been established in any of the proposals that have been submitted that are to deal with questions that would potentially be of a universal interest to elementary-secondary schools (e.g., the centers on: Assessment, Evaluation, and Testing; Families, Communities, and Children's Learning; Learning to Teach; and Mathematics Teaching and Learning).

For well over 10 years, the department has sponsored an Urban Superintendents' Network. The Network presently consists of the approximately 30 chief executive officers of large city, or large, heavily minority, county systems. Creation of this program represents a discretionary act by ED. The annual budget in support of the Network is estimated to be roughly $25,000 (estimate provided by OERI staff).

The objectives of the program are to provide the urban superintendents an opportunity to meet ED staff and others "to consider issues relevant to urban education, react to Department of Education plans, and to consider ways research findings can be used to solve practical problems in schools" (Gruskin, Campbell, & Paulu, 1987, p. 69).

Efforts of Other Departments

Federal support for elementary-secondary and postsecondary education, and for other educational purposes (e.g., libraries, museums, research), is provided by a number of federal departments and agencies other than ED. The profile provided below concentrates on the major efforts made by the 10 largest non-ED providers of federal education funding for all levels of education, and on the 10 largest federal outlays for elementary-secondary education, in FY 88. In a recent report, Hoffman (1989) identified seven departments and three agencies as having major education programs in FY 88 that exceeded one-half billion dollars each. As shown in Table 4, programs administered by ED, though representing the largest budget appropriations of any single agency, accounted for less than one-half of the total budget appropriations of the combined 10 largest federal providers of education programs and services.

Hoffman's (1989) report also breaks out federal support for elementary-secondary and postsecondary education. As shown in Table 5, the child nutrition program administered by the Department of Agriculture was the largest single federally-funded program at the elementary-secondary level in FY 88. Two programs administered by the Department of Labor—the Job Training and Partnership Act and the Job Corps—are also included in the 10 largest federal initiatives in elementary-secondary education. The Departments of Health and Human Services and Defense each had one program that was also ranked.

Federal level coordinating mechanism. The FICE, though in existence by Executive Order since the early 1960s, was statutorially created as part of the Department of Education Authorization Act of 1979 (P.L. 96-88, Title II, Section 214) (20 USC 3424). The objective of FICE was to provide the Secretary of Education, the statutory chair of FICE, a mechanism for coordinating activities of ED with other federal departments and independent agencies. The Act specified that the President was to appoint senior policy level representatives of 13 units to serve as charter members on FICE (the seven Departments of Agriculture, Defense, Education, Health and Human Services, Housing and Urban Development, Interior, and Labor, and the six independent agencies of Administration for Children, Youth, and Families; National Endowment for the Arts; National Endowment for the Humanities; National Science Foundation; United States Information Agency; and Veterans Administration [that has since gained Cabinet status]).

The Vice Chair of FICE is the Deputy Undersecretary of Intergovernmental and Interagency Affairs. Until 1990, FICE had four active subcommittees, or

Table 4

Ten Largest Providers of Federal Education Funding for All Levels of Education, FY 88

Agency	FY 88 Estimates		Special Programs Targeted on Rural, Small School District Programming
	Amount (in billions of dollars)	Percent of Total	
Department of Education	18.9	43.6	yes (see Sec. 2)
Department of Health and Human Services	6.0	13.8	no
Department of Agriculture	5.6	12.8	yes
Department of Defense	3.6	8.4	no
Department of Energy	2.2	5.1	no
Department of Labor	2.1	4.7	no
National Science Foundation	1.5	3.4	no
Veterans Administration	1.0	2.3	no
National Aeronautics and Space Administration	.7	1.6	no
Department of the Interior	.5	1.1	yes
All other federal agencies	1.2	3.2	yes
Total	43.3	100.0	

Note: Percentages based on unrounded numbers.

Source: Hoffman, 1989.

working groups, on: environmental education (created in 1981), early childhood education (1986), occupational literacy (1987), and rural education (1987) (FICE, February 21, 1990).

One important recent action of FICE was the adoption in 1989 of a *An Agenda for Research and Development on Rural Education* (FICE, 1991). Staff work on the agenda was completed by the FICE Subcommittee on Rural Education assisted by rural education specialists in the 10 ED-sponsored Regional Educational Laboratories and other nonfederal specialists. The multiple intents for producing the agenda, that represents what is viewed to be a new precedent, are captured in the following quote:

By making the results of its work broadly available, the Federal Interagency Committee on Educa-

Table 5

Ten Largest Federal Education Programs in Elementary-Secondary Education, FY 88

Program	Administrative Department	Amount Spent in FY 88 (billions of dollars)	Special Programs Targeted on Rural, Small School District Programming
Child nutrition programs	Agriculture	4.4	no
Grants for the disadvantaged	Education	3.8	yes
Education for the handicapped	Education	1.8	yes
Job Training and Partnership Act	Labor	1.3	no
Head Start	Health/Human Services	1.2	no
Vocational and adult education	Education	1.0	yes
Impact aid program	Education	.8	no
Overseas dependent schools	Defense	.8	no
Special programs	Education	.7	yes
Job Corps	Labor	.7	no
Other elementary-secondary	—	2.1	yes
Total		18.6	

Note: Percentages based on unrounded numbers.

Source: Hoffman, 1989.

tion and its Subcommittee on Rural Education wish to open an ongoing dialogue on the problems of rural education, to encourage the targeting of research and development resources, and, in some cases, to influence the methodologies being used in research and development on broader topics. It wishes to do this so that educators in rural America can be given greater help in their efforts to improve educational outcomes for rural learners of all ages. Moreover, the Committee wishes to encourage coordination and collaboration among researchers and to be kept informed, by its member agencies as well as the broader research community, of studies in progress or those being planned that show hope for helping rural schools to answer these questions and others like them (p. 1).

Six topical research priorities, each with multiple and relatively ambitious subresearch questions, were identified:

- the overall effectiveness of rural schools,

- curricular provisions in rural schools,
- school and community partnerships on behalf of rural schools,
- human resources for rural schools,
- use of technology in rural schools, and
- financial support and governance for rural schools (pp. 2-5).

The adoption of a research agenda in 1989 represents one step in the furtherance of one of the tactical objectives established in *Rural Education and Rural Family Education Policy for the 1980s* (United States Department of Education, 1983). The extent to which the agenda has been used by the 13 agencies represented on FICE, its influence on the work of the even larger membership of the FICE Subcommittee on Rural Education, or its impact on the work of ED's Intra-Agency Rural Education Committee is not known.

Major programs of departments. A number of programs administered by the Departments of Agriculture, Energy, Health and Human Services, and Labor represent a significant federal presence in elementary-secondary education. An overview of the activities of these four departments in addition to those of the Department of the Interior is provided below. The overview includes: the title of the programs and their CFDA numbers; the objectives of the programs; features of the formula used by a department to establish state or local district allocations, if any; whether or not an urban or a rural set-aside is used and the nature of these, where applicable; whether or not a matching requirement is used; and whether or not a maintenance of effort requirement is used.

Also included in the discussion is a brief description of other activities of still other departments, that while not major in terms of total appropriations, nonetheless are significant with regard to potential assistance welfare of the nation's rural, small school districts.

The Department of Agriculture administers a large number of programs designed to improve child nutrition (as well as, of course, to promote other federal agricultural policies). The main features of what is viewed to be the most significant efforts of this type of interest here are provided in Table 6. The three programs singled out all relate to the nutritional needs of America's school-age children and youth. The department promotes other nutritional initiatives for which elementary-secondary schools benefit beyond the three programs cited, including: state assistance in providing food services for child care centers (an increasing focus of many districts), and, importantly, assistance to the states in enhancing their ability to provide technical assistance to local districts in food care services.

Agriculture is also engaged in other initiatives that promote the interests of rural education and rural school-age children and youth. The following three especially rich national resources are of special significance:

- the Economic Research Service that conducts research on the economic and social trends occurring in nonmetropolitan regions, and importantly in recent years, on the potential of rural education in rural economic development efforts;
- the Cooperative Extension Service that has in recent years assumed a major program commitment to promote rural community development, and that for many years has sponsored the (predominantly rural) National 4-H; and
- the National Agriculture Library's administration of the Rural Information Center, an information and referral service for rural local governments, and the Youth Development Information Center, an information and referral service for professionals who work with (predominantly rural) youth.

The major Department of Energy program designed to assist elementary-secondary schools is the Energy Conservation for Institutional Buildings (CFDA No. 81.052). The objective of this program is to provide grants to schools to secure technical assis-

Table 6

Selected Features of the Department of Agriculture Major Education Programs

Program and CFDA Number	Major Program Objectives	Major Features of Allocation Formula, If Used	Urban or Rural Set-Asides, If Any	Matching Require ments?	Maintenance of Effort Requirement?
Food Distribution: Child Nutrition CFDA No. 10.550A	to improve nutrition of school and preschool age children and youth; to increase market for domestically produced food products	state allocations are open-ended entitlements of surplus federal commodities or cash based on number of meals served X current rate of reimbursement	no	no	no
School Breakfast Program CFDA No. 10.553	to assist states in providing nutritious breakfasts to school-age children and youth	cash allocations to states; subsidies paid LEAs based on income levels of families of children and youth served	no	no	no
National SchoolLunch Program CFDA No. 10.555	to assist states in providing school lunch program to children and youth	cash grants and food donations; subsidies paid LEAs based on income levels of families of children and youth	no	yes (state ordinarily a 30 percent match)	no

Sources: United States General Accounting Office, 1987, and United States General Services Administration, 1990.

tance for the promotion of energy conservation measures. This is a formula grant program that has a matching requirement. A central feature of the formula is the use of a state population factor. No rural set-asides are used.

The major preschool program administered by the Department of Health and Human Services cited here is Head Start. The major objectives of the program are:

> ...to provide comprehensive health, educational, nutritional, social and other services primarily to preschool economically disadvantaged children, including Indian children on federally-recognized reservations and children of migratory workers, and their families; and to involve parents in activities with their children that will attain overall social competence (United States General Accounting Office, 1987, p. 86).

Two-thirds of the funds are distributed to the states based on a state's share of the number of children aged birth through five living in families below the poverty level. One-third is based on a

state's share of the number of children aged birth through 18 living in families receiving Aid to Families of Dependent Children.

Thirteen percent of the appropriation is set aside for discretionary purposes that potentially provide assistance to special populations of rural children and youth: Indian tribes, territories, migrants, and special services for the handicapped. Recipients must provide 20 percent of the total cost of the program in cash or in-kind, but this matching requirement can be waived in special cases, such as grantees serving large numbers of migrant children. The program also has a maintenance of effort requirement (United States General Services Administration, 1990).

The Department of Labor administers two of the federal government's top 10 education programs: two titles within the Job Training Partnership Act (JTPA) and Job Corps. The main features of the two titles of JTPA programs are presented in Table 7.

Though not a program on the scale of others cited in this profile, the Bureau of Indian Affairs is the administrative unit for a federal program designed to provide supplemental education programs for Indian students of recognized tribes in attendance at usually rural public schools (Indian Education-Assistance to Schools, CFDA No. 15.130). State allocations are established by determination of the number of eligible students in each state, weighted by the average state per-pupil expenditure. No matching requirements are used. However, recipients must demonstrate a maintenance of effort.

Other departments and independent agencies. Several other departments have important education programs. The huge manpower training program of the Department of Defense (DOD) is, of course, one of the largest educational enterprises in the world. The overseas dependent schools of DOD were ranked as one of the largest federal education programs for elementary-secondary school-age children and youth in FY 88, as previously established. Neither of these two major DOD efforts has a rural set-aside, nor would they be expected to have. One of DOD's smaller programs, however, does have potential significance for rural, small school districts. A program administered by the Office of Economic Adjustment provides planning and coordinating assistance to (predominantly rural) communities facing the phaseout of military installations.

The Department of Commerce has a Public Telecommunications Facilities program that awards matching grants to noncommercial organizations for the purchase of radio and television equipment. Many of the requests for the grants, that also provide funds for the development of instructional materials, would ordinarily be expected to serve large rural areas.

A program of the Environmental Protection Agency, Asbestos Hazards Abatement (Schools) Assistance (CFDA No. 66.702), is designed to provide technical assistance and funds to local school systems. Both direct loans and grants are available. This is not a formula program. Matching requirements are present for both loans or grants. No rural set-aside is used.

A number of the independent agencies of the federal government also engage in extensive educational programs. As noted earlier, the two independent agencies, the National Science Foundation and the National Aeronautics and Space Administration, ranked in the 10 largest providers of federal education funding in FY 88.

A brief description of the current activities of a number of independent agencies having prominent education missions is provided in Table 8. Of the illustrations provided, the Appalachian Regional Commission (ARC) probably has the most ambitious agenda to address equity and quality issues in rural, small school district programming. Over the years, the ARC has had a strong commitment for support of vocational education. It has also periodically funded research and policy development efforts in critical policy and programming issues facing the large nonmetropolitan regions in the Commission's 13-state region.

Why the Apparent Federal Reluctance to Do More

If the need exists for the federal government to better recognize rural school districts, let alone the diversity that exists within this component, as previously claimed, why has it not been more widely

Table 7

Selected Features of the Department of Labor Major Education Programs

Program and CFDA Number	Major Program Objectives	Major Features of Allocation Formula, If Used	Urban or Rural Set-Asides, If Any	Matching Requirements?	Maintenance of Effort Requirement?
Job Training Partnership Act, Title II-A: Basic Program CFDA No. 17.250A	to provide job training to economically disadvantaged individuals	1/3 to areas of substantial unemployment; 1/3 in proportion to number of "excess" unemployed; 78 percent must be distributed to service delivery areas; remainder also earmarked	no	yes (8 % for coordination)	yes
Job Training Partnership Act, Title II-B: Summer Youth CFDA No.	to provide summer youth employment and training programs for economically disadvantaged youth	same as Title II funds, except all, rather than 78 percent, must be allocated to service delivery areas	no	no	yes

Sources: United States General Accounting Office, 1987, and United States General Services Administration, 1990.

acknowledged? The decision of federal policymakers generally to not differentiate rural, suburban, and urban schools or students in federal assistance programs can probably be traced to a number of factors, or more than likely, a combination of factors. The themes are discussed below, in no particular order of intended importance:

- A belief that it is, in fact, not critical to do so, that after all, one of the overriding functions of federal aid to education ought to be the improvement of the quality of education irrespective of locale, and that the energies of federal agencies having responsibility for administering education aid ought to be focused on this overriding objective.
- The view that the data collection costs associated with targeting diverse rural systems, the technical features of which would be admittedly formidable, are too high in relationship to the potential benefits that would result.
- Closely related, the concern is no doubt real that the decision to isolate dissimilar rural places would set the stage for claims that other sectors of the public school universe also be addressed (and thus contribute one more step in the seemingly endless and increasingly lamented rush to fragment American society).
- Not surprisingly, at least to me, there may be an unwillingness in some federal units to confront head-on the equity of the distribution of programs they administer, either on the premise

Table 8

Elementary-Secondary Education Programs of Selected Independent Agencies

Agency	Brief Description of Recent Activity(ies)	Special Programs Targeted on Rural, Small District Programming
National Science Foundation	support for education and training programs	no
National Aeronautics and Space Administration	support for education programs (staff development, instructional programs)	no
National Endowment for the Humanities	support for education programs	no
Appalachian Regional Commission	funds for education and training; sponsorship of special studies on adult literacy, high school dropouts, impact of reform on schools; funds for support of an academic high school	yes
Tennessee Valley Authority	funds for education and training	yes

Source: Lyng & Varetour, 1989.

that equity is not the intended overriding Congressional and administrative objective of the program, or on the belief that other objectives should prevail.

Moreover, it is also important to acknowledge that the effects of the significant work underway over the past few years by the NCES to construct a typology that assigns all schools (not school districts at this time) in the nation to one of seven mutually exclusive types-of-locale (the "Johnson Code") have not yet been felt. The utility of this typology may not yet have been fully assessed by either federal legislative or executive branch interests. Although the "Johnson Code" does not address the rural diversity issue, it does nonetheless establish one important building block to do so (the ZIP code identification of schools located in rural and small towns).

Moreover, the previously described work underway by the Economic Research Service in the construction of what is referred to as "policy-impact codes" (the "Beale Code" and the classification of nonmetropolitan counties based on their primary economic activity), especially when combined with the "Johnson Code," could ultimately provide one way to build a classification of rural school districts that would address the diversity question. The utility of a combination of these three classifications has not yet been assessed in a systematic way and this may in part account for the seeming reluctance of federal agencies to acknowledge the diversity that exists in rural districts.

In many ways the focus of the possible explanations of the hesitation of federal agencies to embrace the notion that it would be beneficial to acknowledge

the demonstrable dissimilarities in the rural school component of the public school universes cited above gives prominence to operational issues that tend to be focused exclusively on education. But there are clearly other obstacles, as well. It could be that the relatively meager current federal interest in better understanding rural education is merely a manifestation of a much larger neglect of rural America generally. In discussing factors that appear to hamper the development of a comprehensive national rural development policy, Swanson (1991) cites the principal stumbling blocks as:

> (1) an unrealistic, often romantic view of a bucolic rural economy and society; (2) serious limitations to existing social and economic data on sparsely populated areas; (3) the treatment of rural America as a geographical entity unconnected to the larger U.S. economy and society; (4) a perception that many rural areas do not have viable political solutions; and (5) the absence of a unified rural constituency and the presence of a formidable opposition to renovated and new rural development programs (p. 4).

One could, of course, take issue with any one of the individual themes introduced above, though it would be much more difficult to dismiss the claim that there is probably validity to the general direction of possible explanations cited when these are considered as a whole. Whatever the cause or causes, however, the thesis of this paper is that this issue can no longer be neglected, not to build a case demonstrating either the passive or, worse, the active neglect of the federal government. Rather, the objective of the paper is to start the debate about how best to consider the peculiarities of the context in which rural school systems function. The proposed design of one approach for addressing this issue is outlined next.

Section Four: The Proposed Design of a Policy-Impact Code

Discussed below is the approach argued for here to further the objective of this statement; that, it is to be recalled, is to promote a debate about the need for the federal government to better acknowledge the demonstrable similarities and dissimilarities that exist in the rural school component of the public school universe. In the final analysis, of course, the move to address the diversity issue will be a political decision. It is hoped, however, that this act would be informed by a consideration of a number of conceptual and methodological issues that surround the problem of how best to do so. The design issues associated with the task of building a classification system of rural districts are, of course, huge. A number of those have been selected for the discussion that follows:

- the rules of classification that I would argue ought to be used as guides for the construction of a rural school district policy-impact code;
- the criteria that I would support for use in the selection of measures to establish the presence or absence of diversity;
- what alternative measures are available to operationalize these selection criteria; and
- finally, the measures I would argue ought to be used for the construction of the code.

Basic Assumptions

Before proceeding with the discussion of each of these four design issues, it is important first to establish several assumptions that must be made in taxonomic efforts such as that undertaken here. Though the ultimate objective of this initial statement is on the construction of a policy-impact code for classifying rural districts, it is nonetheless just as important to establish the assumptions guiding this effort as would be the case where the objective was the development of a typology of rural school systems. Accepted, then, are the following basic premises.

Foremostly, the goal of this effort, as with typological work generally, ought to be to improve the predictive power and, subsequently, the utility of data on the phenomenon under study. Bealer (1987) makes this point succinctly with this reminder:

> **All** classification schemes or taxonomies involve—somewhere, sometime—a conscious, rational concern to sort out the variables of analysis into their most causally revealing form(s) (p. 5).

Thus, the goal is to disaggregate the data on the rural school district sector of the public school universe on the assumption that while generalizations about this component are clearly of value, they nonetheless may mask the demonstrative variability that exists within it. As stated by Bealer:

> Ideally, the goal of typological procedures is to sort data so that within each classification cell—however many get used, be it 2, 20, or 2,000—there is perfect homogeneity while, at the same time, there is maximal heterogeneity among or across the cells of the classification. Then, if the thing or things (i.e., dimensions) used to sort cases into the different cells are causally linked in the real world to other events—and, if we get good measures to allow that causal connectedness to show through; well, then, by glory, we are

> going to be in the researcher's nirvana. We will get correlations of 1.0 and our predictive capability will be perfect. Whether stated or not, this is the goal that typological work is after. Good typological work is a self-conscious attempt to improve the predictive capability and, by turn, the potential utility of research data (p. 5).

Moreover, it is assumed that the use of a single variable to establish similarities or differences in rural school districts will be inadequate, and that rather, multiple variables will be required. However, though multiple variables are a necessity, there is probably a clear limit on this number for a policy-impact code or for a typology to be most useful. The final selection of variables from what is usually a larger pool of meaningful variables generally means that some good indicators will be discarded. This is a largely subjective process. However, the stated purpose for construction of the code should govern this selection process, thus providing a degree of objectivity to the exercise. Additionally, I accept Hrebiniak's (1978) assertion that multiple variables concerning types of organizations on the one hand "can be stipulated and measured," and that, on the other, and as a result of this, "organizations can be categorized into classes or types by using [these] defining characteristics" (p. 328).

Furthermore, though the arguments for the empirical derivation of a typology advanced by Luloff (1987) and others are pervasive, I assume that a deductive or a priori approach for the construction of a rural district policy-impact code is the best course to follow at this time. This position is premised on the belief that there is sufficient information currently available to serve as the basis for an initial classification system that is intended to illustrate the demonstrable diversity in rural systems. Moreover, as stressed earlier, it is also assumed that the hoped-for subsequent design and testing of empirical derivations would benefit from this initial a priori approach.

Finally, I accept Hall's (1972) useful assertion that to be effective, a classification of types of organizations must reflect the complexity that characterizes most organizations. To do this, Hall argues that the system used must account for at least three things:

- the array of external conditions that surround an organization,
- the total spectrum of actions and interactions within an organization, and
- the outcomes of organizational behavior (p. 41).

Rules of Classification

I draw upon the work of Dunn (1981) again to introduce the discussion of rules of classification provided below. This is so because Dunn correctly places consideration of this issue in the context of problem structuring, that he defines to mean "...the process of generating and testing alternative conceptualizations of a problematic situation" (p. 119). Though I, and perhaps other rural interests, view the diversity question in rural education as a clear policy issue, it must be acknowledged that the question is nonetheless a problematic one for others in the sense that there will be disagreement concerning the value of doing so, as well as how best to accomplish this act. Rules of classification is one of several techniques that Dunn argues for as ways that permit analysts to generate and analyze information, two essential steps in the correct specification of a policy problem. The correct specification of a policy problem is, of course, essential for reducing the probability of making errors of the third kind (E_{III}), defined by Dunn as "providing the wrong substantive or formal representation of a problem when one should have provided the right one" (p. 109).

As stated by Dunn,

> Classificational analysis is a technique for clarifying concepts used to define and classify problematic situations... [and]...is based on two main procedures: logical division and logical classification. When we select a class and break it down into its component parts the process is called logical division; the reverse process, which involves the combination of situations, objects, or persons into larger groups or classes, is called logical classification (p. 119).

As is true of others who have engaged in typology construction (Blau & Scott, 1962; Etzioni, 1961; Hre-

biniak, 1978; Luloff, 1987; Mintzberg, 1979; Parsons, 1960), Dunn is firm in the belief that the basis of any classification depends on the analyst's purpose (p. 119). Further, Dunn holds what seems to be the prevailing position that there are no known techniques that permit one to know with absolute confidence whether or not the bases selected for the classification system are the right ones to use. He nonetheless argues, however, for the use of five rules that should help ascertain that the classification system selected by the analyst is both relevant to the problematic situation under study, and, further, will stand the test of logical consistency. The five rules are:

1. **Substantive Relevance:** The basis of a classification should be developed according to the analyst's purpose and the nature of the problematic situation. This rule, deceptively simple in theory, means that classes and subclasses should conform as closely as possible to the "realities" of the problematic situation. Yet since what we know about a situation is partly a function of the concepts we use to experience it, there are no absolute guidelines that tell us when we have perceived a problem correctly.

2. **Exhaustiveness:** Categories in a classification system should be exhaustive. This means that all subjects or situations of interest to the analyst must be "used up," so to speak.

3. **Disjointness:** Categories must be mutually exclusive and independent. Each subject or situation must be assigned to one and only one category or subcategory.

4. **Consistency:** Each category and subcategory should be based on a single classificational principle. A violation of this rule leads to overlapping subclasses and is known as the fallacy of cross-division. This rule is actually an extension of rules of exhaustiveness and disjointness.

5. **Hierarchical Distinctiveness:** The meaning of levels in a classification system (categories, subcategories, sub-subcategories) must be carefully distinguished. This rule, which is really a guideline for interpreting classification systems, is derived from a simple but important axiom put forth by philosophers Alfred North Whitehead and Bertrand Russell: "whatever involves **all** of a collection must not be one of the collection" (p. 121-122).

Dunn's five rules of classification have substantial merit and would be more closely adhered to were this statement one that attempts to frame a background for the construction of a rural school district typology. This of course is not the objective. Rather, what is being attempted here is the construction of a policy-impact code for classifying rural systems. Therefore, I would argue for the acceptance of two of Dunn's rules, but not others, and would also add one not addressed by Dunn. The rules of classification proposed by Dunn that I would retain and the working definitions adopted for each for this exercise are:

1. **Substantive Relevance:** The policy-impact code should account for variations in the health and performance of rural school districts and the principal causes for any differences that are observed to exist.

2. **Exhaustiveness:** All school districts in the rural component of the public school universe should be included in the policy-impact code.

Retention of Dunn's rule of substantive relevance, and the way this rule is defined here, is consistent with the purpose of this exercise. That is, the objective of the policy-impact code is to account for variations in the health and performance of rural districts, and the principal causes for any observable differences, so that federal policy can be better directed and thus made more effective. Importantly, the adopted working definition of Dunn's rule of substantive relevance honors Hall's three tests of the functions of an organizational classification system. The retention of the widely acknowledged rule of exhaustiveness will assure that all rural systems in the nation are included in the classification system.

The absence here of Dunn's rule of disjointness is perhaps the most arguable choice made. However, as

the objective of this exercise is to construct a policy-impact code, rather than a typology, the need for the mutual exclusiveness of the classes used is not viewed to be critical. Wilkinson (1987) addresses the issue of exclusiveness or overlapping types in this way:

> The overlap problem comes up when the purpose of constructing the typology is to move beyond the heuristic into further analysis of empirical cases (p. 175).

In making a distinction between types and classes in a classification system such as that attempted here, Wilkinson asks the question, "Can a case (or a category of cases) belong to more than one type in a typology?" His answer is that:

> ...nothing is wrong with it as a general rule, but a great deal can be wrong with it in particular instances. The purpose makes all the difference. Why is the typology being constructed? (p. 174).

In addition to the retention of Dunn's two rules of classification, I would argue for a third rule of what I will refer to as the rule of:

3. **Numerical Relevance:** The number of classes of rural school districts in the policy-impact code should be limited in order that the dominant, most distinguishable features of districts of this type can be readily recognizable and understood.

The inclusion of this rule of classification is intended to address the need to present a lucid, easily understood way of viewing the most critical features of the rural school component of the public school universe in the nation so that public policy can be more responsive to the differing needs of this class of districts. Ordinarily, this rule would suggest that numerical relevance would probably be violated if the number of classes exceeded a range of five to seven.

Criteria for the Selection of Measures

The question now pursued is what criteria ought to be employed to select measures that would satisfy the three rules of classification previously adopted. I have chosen to organize the selection criteria argued for into two classes: content criteria and data collection criteria.

The content criteria are three in number:

1. Foremostly, the measures must provide a comprehensive view of the core context, input, and process features of rural systems that are known or highly likely to be associated with the core outcomes of this class of districts.
2. The indicators must be place-neutral; that is, they must not have a significant urban, suburban, or rural bias.
3. The measures must provide the policy and research/school improvement communities with information concerning this class of districts that is policy-relevant.

The data collection criteria are four in number:

1. The data must fall within the responsibility of the federal government.
2. The data must be available at the rural school district level.
3. The data must be made available to the federal policy and research/school improvement communities supported by it in a timely manner; that is, at two-year intervals.
4. The burden of collecting the data must be minimal with regard to both direct costs and staffing requirements.

Alternative Measures

Discussed now are alternative measures that appear to have potential for honoring the two sets of selection criteria used here. There certainly is no dearth of measures that could be used for the construction of a policy-impact classification system for rural school districts. A list of approximately 90 potential measures are identified below, organized around the four classes of indicators that utilize the causal modeling approach to indicator development.

Before identifying alternative measures in each of the four clusters, the rationale for the exclusive use of the causal model as the organizing vehicle for this exercise is briefly established.

Causal modeling approach to indicator development. The argument for the use of a causal model to represent the important features of an educational system is made forcibly in *Indicators for Monitoring Mathematics and Science Education* (Shavelson, McDonnell, & Oaks, 1989):

> National indicators must represent, at least roughly, the important components of an educational system.... In addition to monitoring outcomes, indicators should reflect the characteristics of students and communities served by schools, the financial and human resources (especially teachers) available to the schools, and other educational inputs. Moreover, they should reflect the adequacy of the curriculum and instruction received by students, the nature of the school as an organization in pursuit of educational excellence and equity, and other educational processes. Finally, indicators must be related to one another so that their relationships, and changes in these relationships, can be ascertained to suggest possible "explanations" for observed changes in outcomes (pp. 6-7).

Shavelson et al. establish four assumptions that guided their work in the development of a causal model:

- An indicator system should be based on a conceptual model of schooling.
- That model and its major domains should be empirically, rather than normatively, derived.
- A major criterion for selecting the potential indicators within each domain should be their ability to measure core features of schooling.
- Where possible, indicators should be derived from research that identifies the factors associated with important schooling outcomes (p. 13, 1989).

Still another extended quote from the Shavelson team is provided as support for the causal model approach to indicator development, rather than the use of a key major issue, or the normative approach, the second principle method in current use.[10] Shavelson et al. stress that:

> Understanding the educational process requires attention to all levels, as well as specification of the relationships among conditions at each level and student outcomes. This task will inevitably generate considerable methodological frustration, but neglect of multilevel elements will lead to superficial and simplistic portrayals of schooling. Far from clarifying the dynamics of the schooling process, simplification can ignore critical factors. How schools organize educational resources and learning opportunities and how schools respond to new policies and other kinds of improvement efforts are often neglected, even though few would deny their importance. However, these elements must be simplified if they are to be studied. The inevitable tension between comprehensiveness and clarity must be resolved by identifying the meaningful factors that are actually measurable in a standardized way across schools (p. 14).

Classes of indicators. The working definitions of each of the four classes used here are:

- **Context Indicators:** Defined here to include the characteristics of the community served by the rural school and system features of the district itself that are known or highly likely to be associated with the health and performance of the district.
- **Input Indicators:** Defined here to include the financial, staffing, student, and other human and physical resources available to the rural school system that are known or highly likely to be associated with the health and performance of the district.
- **Process Indicators:** Defined here to include the programming, instructional, and organizational resources available to the rural school system that

are known or highly likely to be associated with the health and performance of the district.

- **Outcome Indicators:** Defined here to include measures of the quality of schooling provided by a rural school system.

This grouping is itself arguable, as is the subsequent placement of some clusters in one class rather than another. The use of context variables as well as input variables, rather than combining these as is frequently done, is perhaps the most arguable choice. The decision was made to follow the lead presented in the Context-Input-Process-Product (CIPP) model (Stufflebeam, Foley, Gephart, Guba, Hammond, Merriman, & Provus, 1971) that the identification of the context in which complex educational undertakings take place is necessary for understanding possible relationships between inputs, processes, and products or outcomes and thus ought to be given individual prominence.

An overview of the major clusters of indicators in the four classes of context, input, process, and outcomes measures used here is provided in Table 9.

Definition of an indicator. There are of course many statistics available on rural school districts. However, only those that satisfy the working definition of an indicator argued for in the final report of a recent OERI task force formed to explore the use of educational indicators were considered for inclusion here. The task force, made up of representatives of 10 state education agencies, a number of national professional associations, as well as ED staff, defined an educational indicator thusly (OERI Programs for the Improvement of Practice, 1988):

> Indicators, or statistics that reveal something about the health or performance of the educational system, constitute the basic building blocks of state performance accountability systems. However, not all statistics about education can function appropriately as indicators. Statistics qualify as indicators only if they serve as gauges, that is, if they tell a great deal about the entire system by reporting the condition of a few particularly significant features. For example, the number of students enrolled in schools is an important fact about the size of the educational system, but it tells little about how well the system is functioning. On the other hand, a statistic that reports the proportion of secondary students who have successfully completed advanced study in mathematics provides useful information about the level at which students are participating and achieving in that subject. This statistic provides considerable insight about the condition of the system and can be appropriately considered an indicator p. 5).

Though the working definition of an indicator adopted by the OERI task force will be employed, it is important to note that there clearly might be huge differences concerning how individuals might view indicators that "...serve as gauges; that is,...tell us a great deal...[about]...the condition of a few particularly significant features." Grandy's (1989) discussion of the complexities in developing educational indicators, in particular, is an especially useful reminder:

> In the social and behavioral sciences, we also speak of indicators: social indicators, economic indicators, and education indicators. In these sciences, unfortunately, it is not always clear what is an indicator of what. From common usage of the word, an indicator must indicate something. That "something" may be a type of event observable in the future, or it may be a construct, that is an abstraction that is not observable in itself but consists of many elements, generally too numerous to list. Examples of constructs include intelligence, knowledge, ability, attitude, socioeconomic status, poverty, happiness, and health. Similarly, the indicator itself may be observable or it may be a construct. The distinction between observables and constructs is important to make, not only so that we are clear about the nature of the indicator and how to generate it, but because the distinction has important implications for establishing the validity of the indicator.
>
> Test scores in mathematics (observables) are indicators of mathematical knowledge and skills (constructs). Education indicators are nearly always indicators of constructs, and those constructs are rarely well defined. The result is that the linkage between an indicator and what it allegedly indicates is often tenuous (p. 12).

Table 9

Overview of Alternative Indicators, Organized by Class and Cluster

Class and Cluster		Number of Indicators	Percent of Total
CONTEXT			
school-community characteristics		10	
school system characteristics		2	
	sub	12	13
INPUT			
fiscal characteristics		4	
staff characteristics		6	
student characteristics		8	
parent involvement		1	
facility characteristics		1	
	sub	20	22
PROCESS			
program characteristics/pre-elementary		7	
program characteristics/secondary		13	
teaching/instructional characteristics		7	
instructional support characteristics		7	
organizational characteristics		8	
	sub	42	47
OUTCOMES			
student achievement levels		5	
student participation		3	
student behavior/attitudes		5	
post-school outcomes		3	
	sub	16	18
	Total	90	100

Jaeger (1976) addresses these issues forthrightly with the further reminder that there is:

> ...virtually uniform agreement among measurement specialists that standard setting is a judgment process...no amount of data-collection, data analysis, and model building can replace the ultimate judgment act of deciding which performances are meritorious or acceptable and which are unacceptable or inadequate (p. 18).

Sources used to identify indicators. The issues of arbitrariness and subjectivity notwithstanding, an attempt was made to select potential indicators of quality that seem to enjoy support in the

professional and policy communities (for example, as the way one ought to judge the organizational effectiveness of schools, or how one should hold schools accountable). The principal sources used to establish indicators that appear to best reflect current thinking about what ought to be the focus of indicator development were:

- the literature on effective schools;
- the 1991 report of the National Education Goals Panel (*Measuring Progress Toward the National Education Goals: Potential Indicators and Measurement Strategies*);
- the 1991 report of the NCES Special Study Panel on Education Indicators (*Education Counts: An Indicator System to Monitor the Nation's Educational Health*);
- the 1990 NCES report on *The Condition of Education* (Volume 1, Elementary and Secondary Education);
- the forthcoming ED report on *The Condition of Education in Rural, Small Schools*;
- the 1988 ED report on *Creating Responsible and Responsive Accountability Systems*; and
- the 1991 ED report on *America 2000: An Education Strategy*.

Alternative context indicators. Alternative indicators that have potential for establishing the characteristics of the community served by the rural school district and features of the school itself that are known or highly likely to be associated with the health and performance of the district include:

- Cluster/School-Community Characteristics:
  1. educational attainment of general population,
  2. size of population,
  3. population density,
  4. unemployment rate,
  5. per capita income,
  6. poverty rate,
  7. accessibility of other human resources services,
  8. accessibility of other community services,
  9. primary economic activity, and
  10. proximity to metropolitan area.
- Cluster/School System Characteristics:
  1. total school-age population, and
  2. size of enrollment.

Alternative input indicators. Alternative indicators that have potential for establishing the financial, staffing, student, and other human and physical resources available to the rural school system that are known or highly likely to be associated with the health and performance of the district include:

- Cluster/Fiscal Characteristics:
  1. financial capacity,
  2. financial support,
  3. financial effort, and
  4. expenditures per pupil.
- Cluster/Staff Characteristics:
  1. percent advanced degrees,
  2. percent certified in teaching fields,
  3. percent teaching in fields certificated,
  4. experience level,
  5. salary level, and
  6. staff stability.
- Cluster/Student Characteristics:
  1. race/ethnicity,
  2. percent educationally disadvantaged,
  3. percent economically disadvantaged,
  4. percent handicapped,
  5. percent limited English,
  6. percent gifted,
  7. percent living in poverty, and
  8. percent one-parent family.
- Cluster/Parent Involvement:
  1. percent participating in school-parent academic planning.

- Cluster/Facility Characteristics:
  1. percent in need of rehabilitation.

Alternative process indicators. Alternative indicators that have potential for establishing the programming, instructional, and organizational resources available to the rural school system that are known or highly likely to be associated with the health and performance of the district include:

- Cluster/Program Characteristics/Preschool and Elementary
  1. availability of preschool program,
  2. availability of kindergarten,
  3. curriculum differentiation,
  4. curriculum articulation,
  5. availability of program in basic core areas,
  6. availability of program in the fine arts, and
  7. availability of program in computer technology.

- Cluster/Program Characteristics/Secondary:
  1. curriculum differentiation,
  2. curriculum articulation,
  3. breadth and depth of program in English core area,
  4. breadth and depth of program in math core area,
  5. breadth and depth of program in science core area,
  6. breadth and depth of program in foreign language core area,
  7. breadth and depth of program in history core area,
  8. breadth and depth of program in geography core area,
  9. breadth and depth of program in the fine arts,
  10. breadth and depth of program in vocational-technical,
  11. breadth and depth of program in computer technology,
  12. availability of honors and A/P courses, and
  13. rigor of graduation requirements.

- Cluster/Teaching/Instructional Characteristics:
  1. instructional time (e.g., days, hours, percent engaged time);
  2. class size;
  3. teaching load;
  4. availability of instructional materials;
  5. availability and adequacy of instructional equipment;
  6. classroom performance/quality of instruction; and
  7. quality of work life.

- Cluster/Instructional Support Characteristics:
  1. availability of library/media services,
  2. availability of counseling services,
  3. availability of health services,
  4. availability of pupil personnel services,
  5. availability of services for the handicapped,
  6. availability of transportation services, and
  7. availability of school lunch services.

- Cluster/Organizational Characteristics:
  1. homogeneity of outlook on mission of school,
  2. agreement on clear goals and high expectations,
  3. quality of instructional leadership,
  4. availability of staff development,
  5. quality of shared decisionmaking,
  6. organizational stability,
  7. quality of school climate, and
  8. safe and orderly environment.

Alternative outcome indicators. Alternative outcome indicators that measure the quality of schooling provided by a rural school system include:

- Cluster/Student Achievement Levels:
  1. National Assessment of Educational Progress,
  2. National Longitudinal Study of the High School Class of 1972,

3. National Education Longitudinal Study of 1988,
4. High School and Beyond (1980-1992), and
5. International Assessment of Educational Progress.

- Cluster/Student Participation:
  1. attendance rates,
  2. completion rates, and
  3. extracurricular activities.

- Cluster/Student Behavior/Attitudes:
  1. suspension/expulsion rates,
  2. drug and alcohol use rates,
  3. teenage pregnancy rates,
  4. vandalism rates, and
  5. civic involvement rates.

- Cluster/Post-School Outcomes:
  1. percent employed,
  2. percent military, and
  3. percent postsecondary schooling.

Preferred Indicators

The indicators I support as meaningful for establishing the diversity in the rural school district component of the public school universe and thus ought to go into the construction of the policy-impact code are shown in Table 10. Though their number is somewhat larger than would be ideal, all are judged to satisfy the three important content criteria established for this exercise (i.e., data measure core context, inputs, and processes known or highly likely to be associated with the health and performance of the district; data are place-neutral; and data would provide policy-relevant information). Additionally, the preferred indicators satisfy the equally important standards established in the four data collection criteria that guide this exercise (i.e., data are a responsibility of the federal government, data are available at the rural district level, data are available in a timely manner, and data collection burden is minimal).

It is to be noted that there is clear emphasis in the list of preferred clusters from which the indicators are drawn that goes beyond satisfying the proposed content and data collection criteria. The clusters stressed and a brief description of the rationale for the choices made follow:

- School-Community Characteristics (because of the clear association of these indicators with many other clusters, and especially because of their effect on the outcomes of a rural school district);

- School System Characteristics (because the size of enrollment of the rural district is in many ways one of the most defining dependent variables for understanding the workings of a rural school district);

- Fiscal Characteristics (because these, too, are so closely associated with many of the process clusters);

- Student Characteristics (because these are so closely associated with, in this case, outcome clusters); and

- Program Characteristics/Secondary (because these are also so closely associated with the outcome clusters).

A relatively large number of other potentially worthy candidate indicators are omitted. For example, my preferred list does not include any of the alternative indicators in the critical cluster of Staff Characteristics, such as the important indicators of quality like experience level or staff stability. Other important clusters omitted include: Teaching/Instructional Characteristics; Instructional Support Characteristics; and Organizational Characteristics.

Though some of the potential indicators in each of these clusters satisfy the content and data collection criteria used here, others do not. The primary reason for excluding those that do satisfy both sets of criteria was to maintain a (relatively) reasonable number of measures for inclusion in the code.[11]

Table 10

Indicators Favored for Inclusion in Policy-Impact Code

Class/Cluster	Indicator(s) Favored
Context	
School-Community Characteristics	size of population; population density; unemployment rate; per capita income; poverty rate; primary economic activity; proximity to metro area
School System Characteristics	size of enrollment of district
Input	
Fiscal Characteristics	financial capacity; financial support; financial effort; expenditures per pupil
Staff Characteristics	
Student Characteristics	race/ethnicity; percent educationally and economically disadvantaged, handicapped, limited English, gifted, and living in poverty
Parent Involvement	percent participation in school-parent academic planning
Facility Characteristics	percent in need of rehabilitation
Process	
Program Characteristics/Pre-Elementary	availability of preschool and kindergarten
Program Characteristics/Secondary	breadth and depth of program in English, math, science, foreign language, history, geography, fine arts, vocational/technical, and computer technology
Teaching/Instructional Characteristics	
Instructional Support Characteristics	
Organizational Characteristics	
Outcome	
Student Achievement Levels	NAEP scores
Student Participation	attendance rates; completion rates
Student Behavior/Attitudes	
Post School Outcomes	percent postsecondary schooling

SECTION FIVE: PROPOSED NEXT STEPS

The single objective pursued in this statement is to promote a debate about the need for the federal government to take the lead in acknowledging the demonstrable diversity that exists in the rural school component of the public school universe. The approach used to further this objective was first to establish the rationale for the concentration here on the federal level, as opposed to initially directing the argument that the state level of government or the research and professional community ought to do so. This was followed by an overview of current federal efforts to target rural school systems or students in attendance in rural districts, and a brief discussion of factors that together help explain why the federal government appears to be reluctant to do more than it presently does to address the unique problems present in rural systems.

The broad design of a recommended approach for the construction of a rural school district policy-impact code was then outlined for the purpose of facilitating the objective of how one might approach this issue. The intent was to place sufficient details of a possible design on the table as a starting point, rather than limit the statement to just another call that some action by the federal government is warranted, given the demonstrable diversity that does, in fact, exist among rural systems all across this vast nation. The proposed design takes a position on the important question of the rules of classification that ought to be adhered to, as well as argues for the use of a small number of criteria for the selection of measures that should go into the make-up of a policy-impact code. It also identifies a number of preferred measures that ought to be used in the code, and the rationale for their choice.

As an initial step for furthering the construction of a policy-impact code, it is proposed that the Commissioner of Education Statistics, NCES, OERI, and ED charter a special study panel to explore this issue. Though the merits of having an independent, nonfederal or Congressional chartered unit undertake the support of the work of the panel are numerous, so too is the great potential for having close linkages with the work underway by the National Education Goals Panel and the Special Study Panel on Education Indicators. Both of these efforts are federally chartered activities and both are closely tied to the work of NCES. It is assumed that the Commissioner would stipulate that the panel have a cross-cutting representation of both federal and nonfederal specialists in rural affairs, as well as include state education agency personnel, thus promoting a unit that would enjoy credibility, as well as possess the methodological and content knowledge to perform its task. It is for reasons such as these that I recommend that the Commissioner of Education Statistics assume the responsibility for management of the panel.

It is suggested that the initial work of the special study panel would give prominence to consideration of:

- the assumptions the panel members are willing to make concerning the construction of the policy-impact code, and the functions it desires the code to perform;
- the rules of classification that would guide the construction of the code;
- the criteria to be used for the selection of indicators;
- refining the pool of potential indicators;
- the set of indicators to be used;

- the number and titles of classes of rural systems that are to be used in the code;
- the issues associated with the implementation of the code across all federal level departments and independent agencies who administer elementary-secondary aid programs; and
- the issues associated with the implementation of the code in all federal level-sponsored data collection activities jointly undertaken with the states (a useful background exercise that should prove to be of value here is Harned's [1989] discussion of the status of the existing data sources on rural schools maintained by a number of midwestern state education agencies).

The position is taken here that the quality of the debate concerning the central issue of the costs and benefits of the use of a policy-impact code for classifying rural school systems will be greatly enhanced once the above sequential steps have been given serious consideration. To debate the issue after, and not before, the completion of inquiry into each of the phases outlined above, is admittedly somewhat unorthodox. Nonetheless, it is argued for as perhaps the best way to ensure that the issue is seriously explored, and that the work of the panel will be viewed as objective, especially by rural interest groups, but by others who have continuing concerns about the equity, adequacy, responsiveness, and appropriateness of federal policies intended to assist public education.

NOTES

1. Certainly one needs to be cognizant of the wealth disparities that are present in a growing number of suburban communities, especially the inner ring areas surrounding a number of large urban centers. See especially du Vise's (1989) survey of 75 suburban areas and Bradley's (1991) commentary that summarizes data from the 1990 Census.

2. Three of what are viewed to be the best works yet undertaken to develop a way to type rural community-rural schools are those offered by Gjelten (1982), and especially Nachtigal (1982), and the Northwest Regional Educational Laboratory (1988). All three make use of multidimensional socioeconomic factors.

3. The conceptualization of the federal policy cycle that makes use of these six phases is the one argued for by Brewer and deLeon (1983). I find it to be one of the most useful perspectives for organizing consideration of the complexities of the processes ordinarily engaged in at the federal level.

4. In a report completed in the early 1980s, the American Association of School Administrators (1984) reported that a number of criteria (e.g., sparsity or density of population, isolation or distance to urban centers, geographic location, smallness in size, economic and social conditions, sociocultural values, occupation of residents) are to be found in the literature or were used by government agencies for defining a rural school district. Of particular note, frequently multiple definitions of a rural system were used within a single federal agency.

5. Education is certainly not alone in struggling with the definitional issue. For example, in a useful review of 178 articles, books, and other sources from the literature on rural sociology and rural mental health, from the decade of the 1970s, Bosak and Perlman (1982) observed that four rural definitional categories were used:

   - **Not Stated:** (used in 77 of the 178 sources, or 43 percent of the time) where the author(s) used the term rural without definition (e.g., that which is not urban, that which is not metropolitan, or not stated at all).

   - **Verbal:** (used in 33 sources, or 19 percent of the cases) where a definition was employed that relied on qualitative criteria, rather than quantitative, such as type of predominant occupational, sociocultural, or value systems of a region. Although specific characteristics were described, amounts were not presented (e.g., a small town and surrounding farm area comprised the rural region).

   - **Homemade Quantitative:** (used in 27 sources, or 15 percent of the time) where a definition included specific quantities of what was rural without reference to an external source (i.e., the definition was not cited as based on previously published work or data).

   - **External Quantitative:** (used in 41, or 23 percent, of the cases) where a definition indicated specific quantities of rural, utilizing external sources such as census data or previously published research (pp. 5-6).

Bosak and Perlman offer the frequent observation that the continued use of multiple definitions makes difficult the analysis of hypothesized urban-rural differences, hampers replication studies, and handicaps cross-sectional studies of different rural regions. Moreover, they conclude that there exists a need for more clearly delineated and multidimensional definitions of what is to be viewed as rural. Their hope is that the conceptualization of what truly is a heterogeneous rural would focus on sociocultural, as well as quantified factors such as occupation and population criteria (p. 25).

Though Bosak and Perlman's call for a new, widely accepted, multidimensional definition of rural is directed at the mental health community, it clearly has applicability not only for education but other public policy arenas as well.

6. For example, in an earlier piece arguing for an expansion of the federal rural education database (not the use of a federal policy-impact code), Parks and Sher (1979) offer three major reasons why this should be done: the changes in rural America brought about as a result of the rural turnaround in the decade of the 1970s; the national mandate for equity; and the need to understand the condition of rural education in the launching of rural development initiatives (pp. 12-17). Parks and Sher's recommendations for specific federal data requirements are: Total Population—size, age, socioeconomic status, race/ethnicity, sex, employment/unemployment, source of personal income, and education attainment; Student Population—size, age, socioeconomic status, race/ethnicity, sex, employment/unemployment, education attainment, enrollment/by type of program, and achievement; School and School Staff Characteristics—size, age (staff), race/ethnicity (staff), education attainment (staff), organization and government, curricula, special services, vocational education, and years of experience (staff); and Educational Financing—source of funds by percent/federal, state, local, and expenditure by type (p. 21).

7. A number of unpublished reports of a meeting of the FICE Subcommittee on Rural Education held in 1988 establish estimates of the rural share of a number of ED programs targeted on other special populations of students. For example, it is estimated that rural students receive virtually all (90 percent) of the services of ED's migrant education programs. It is also estimated that rural students receive the majority (68 percent) of Indian education grants administered by the department. Though no explanation is provided concerning how these estimates were arrived at, both have face validity.

8. Not only do nonmetro areas consistently experience greater rates of poverty than metro areas, but there are also other issues associated with this indicator. As Reeder (1990) reminds us: "Poverty measures the distribution of income, not the average level of income. This is an important distinction when considering how aid is allocated among urban and rural areas. For example, central cities have significant poverty populations, yet they also have concentrations of wealth and relatively high per capita income. Hence, such cities stand to benefit, relatively speaking, from having poverty instead of per capita income in the aid formula. Rural areas, in contrast, are characterized by lower average income and wealth than that of the big city, but their poverty rate is roughly comparable. Thus, rural areas tend to benefit from having per capita income instead of poverty in the aid formula" (p. 20).

9. Salmon (1990) has provided a comprehensive assessment of how the use of many of the commonly employed fiscal features in state school finance formulas affect the fiscal health of rural school districts. Because of the potential relevance of his work for this exercise, his observations about state fiscal practices and their potential urban or rural bias are cited below. According to Salmon:

   - Full state assumption of public school costs or implementation of fiscal equalization formula coupled with high percentage of total costs provided by the state government generally favor rural school districts.

- If rural school districts record high pupil attendance rates relative to other categories of school districts, Average Daily Attendance pupil units would favor the rural school districts. If the rural school districts do not record high rates of pupil attendance relative to urban and suburban school districts, the use of Average Daily Membership or Enrollment pupil units would fiscally favor rural school districts.

- If the state uses a fiscal equalization grant as its major state aid program, income and economic indicators, rather than valuation of property, usually favor rural school districts.

- Adequately funded categorical flat grants or categorical programs funded through state equalization formulae usually favor rural school districts.

- Categorical grants that are based upon "brackets" of identified clients tend to favor rural school districts.

- State tuition assistance programs that are designed so that school districts may transfer low incidence clients to other providers provide fiscal relief to rural school districts.

- Pupil transportation programs that are adequately funded, including replacement costs for buses, and are based upon linear density, usually favor rural school districts.

- Cost-of-living provisions usually favor urban and suburban school districts and penalize rural school districts.

- Economies-of-scale provisions take into consideration personnel staffing difficulties confronting small school districts and provide additional state fiscal assistance to rural school districts.

- Sparsity weights are designed to favor rural school districts, while density weights provide additional state fiscal assistance to urban areas.

- Incentive grants, depending upon their purpose and design, can either reward or penalize rural school districts. If the incentive grant is allocated through either adequately funded flat grants or through fiscal equalization formula, rural school districts are fiscally advantaged. On the other hand, if the state aid program is inadequate and distributed through flat grants, rural school districts usually are disadvantaged. Several states have enacted consolidation incentive grants in order to encourage rural school districts to reorganize and consolidate with their neighboring districts. Such incentive grants certainly provide additional resources to the rural school districts, but also result in significant changes to the culture and character of rural education.

- State capital outlay and debt service programs, depending partially upon the level of state funding and allocation formula, have the potential of relieving the fiscal stress facing rural school districts. However, if the state aid is inadequate and distributed through flat grants, most of the state funds likely will flow to the larger and more affluent school districts, thereby penalizing rural school districts (pp. 146-147).

10. The recently released report *Education Counts: An Indicator System to Monitor the Nation's Educational Health* (1991) by the NCES Special Study Panel on Education Indicators makes a number of strong arguments in support of the use of major issues, rather than the causal approach, as the most useful way to address the issue of indicator development. In arguing for an issue-oriented approach to indicator development, the Special Study Panel advanced four main themes. Because of the importance of this issue for this exercise, these are cited below:

    An issue-oriented approach appeared essential for several reasons. First, most members of the panel have serious reservations about the wisdom of relying exclusively on the major theoreti-

cal model used to justify indicator development in the past, namely a model focusing on a triumvirate of "educational inputs-educational processes-educational outputs." Most panelists view this approach as flawed because it encourages the view that the education system produces "products" by taking various raw materials (e.g., students or resources) and processing them in schools. Such a model may seriously mislead decisionmakers if it encourages school "improvement" in ways that create solutions for the wrong problems.

Second, although another model for indicator development—general goals-specific objectives-measurement (i.e., the model explicitly embedded in the statement of national goals)—appeared promising, the panel ultimately rejected it. However useful this model is for defining goals, it is largely oriented toward policies subject to change. An indicator system organized around today's goals cannot respond to tomorrow's.

Third, the panel hoped to create an issues-oriented indicator system incorporating essential aspects of a "system": It would be comprehensive and complete in itself, incorporating enough fundamental ideas, priorities, and concepts to allow the public to appreciate interconnected aspects of the educational enterprise. On the other hand, the panel does not pretend to have the last word on indicator development. The six issue areas selected by the panel—and the concepts and subconcepts underlying them—can be thought of as a series of ideas that should anchor national thinking not only about indicators but about education in general.

Finally, perhaps most importantly, indicators developed around properly chosen major issues offer an inherent advantage as a means of communicating essential information to the public. Indicator information can serve the needs of educators, or of policymakers, or of the research, analysis, or business communities. But the panel believes that indicators will fail if they do not fulfill their potential to inform the general public about the quality of the educational enterprise. Indicators organized around major educational issues offer many advantages: They provide the opportunity to capture for the public large and enduring educational themes. They can stir debate and discussion. They should provoke thought and controversy. Above all, they can add depth and breadth to the public's understanding of some of the most important social institutions in the United States, the nation's schools and colleges (pp. 9-10).

11. Another alternative option for construction of the code that would embrace a number of the critical context and input indicators included in my list of preferred measures, yet would reduce the overall number of measures even further, would be to build the code by combining the "Beale Code" (Butler, 1990) (see Appendix A), which stresses size of population of metro and nonmetro counties and nonmetro counties classified by size of urban population and adjacency to metro area, and the "Bender et al. Code" (Bender, Green, Hady, Kuehn, Nelson, Perkinson, & Ross, 1985) (see Appendix B), which classifies nonmetro counties by primary economic activity. Elder's (1991) work demonstrates that establishing the number of rural districts in each of the nonmetro counties can be done with a high degree of accuracy.

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THE "BEALE CODE"

Size of Population of Metro and Nonmetro Counties **and** Nonmetro Counties Classified by Size of Urban Population and Adjacency to Metro Area

Code

Metro counties:

0 Central counties of metro areas of 1 million population or more
1 Fringe counties of metro areas of 1 million population or more
2 Counties in metro areas of 250,000 to 1 million population
3 Counties in metro areas of fewer than 250,000 population

Nonmetro counties:

4 Urban population of 20,000 or more, adjacent to a metro area
5 Urban population of 20,000 or more, not adjacent to a metro area
6 Urban population of 2,500 to 19,999, adjacent to a metro area
7 Urban population of 2,500 to 19,999, not adjacent to a metro area
8 Completely rural or fewer than 2,500 urban population, adjacent to a metro area
9 Completely rural or fewer than 2,500 urban population, not adjacent to a metro area

Source: Butler, 1990.

THE "BENDER ET AL. CODE"

Nonmetro Counties Classified by Primary Economic Activity

1. **Farming-Dependent:** Farming contributed a weighted annual average of 20 percent or more to total labor and population income over the five years from 1975 to 1979.

2. **Manufacturing-Dependent:** Manufacturing contributed 30 percent or more of total labor and proprietor income in 1979.

3. **Mining-Dependent:** Mining contributed 20 percent or more to total labor and proprietor income in 1979.

4. **Specialized Government:** Government activities contributed 25 percent or more to total labor and proprietor income in 1979.

5. **Persistent Poverty:** Per capita income in the county was the lowest quintile in each of the years 1950, 1959, 1969.

6. **Federal Lands:** Federal land was 33 percent or more of the land area in a county in 1977.

7. **Destination Retirement:** For the 1970-80 period, net immigration rates of people aged 60 and over were 15 percent or more of the expected 1980 population aged 60 and over.

Unclassified

Source: Bender et al., 1985.